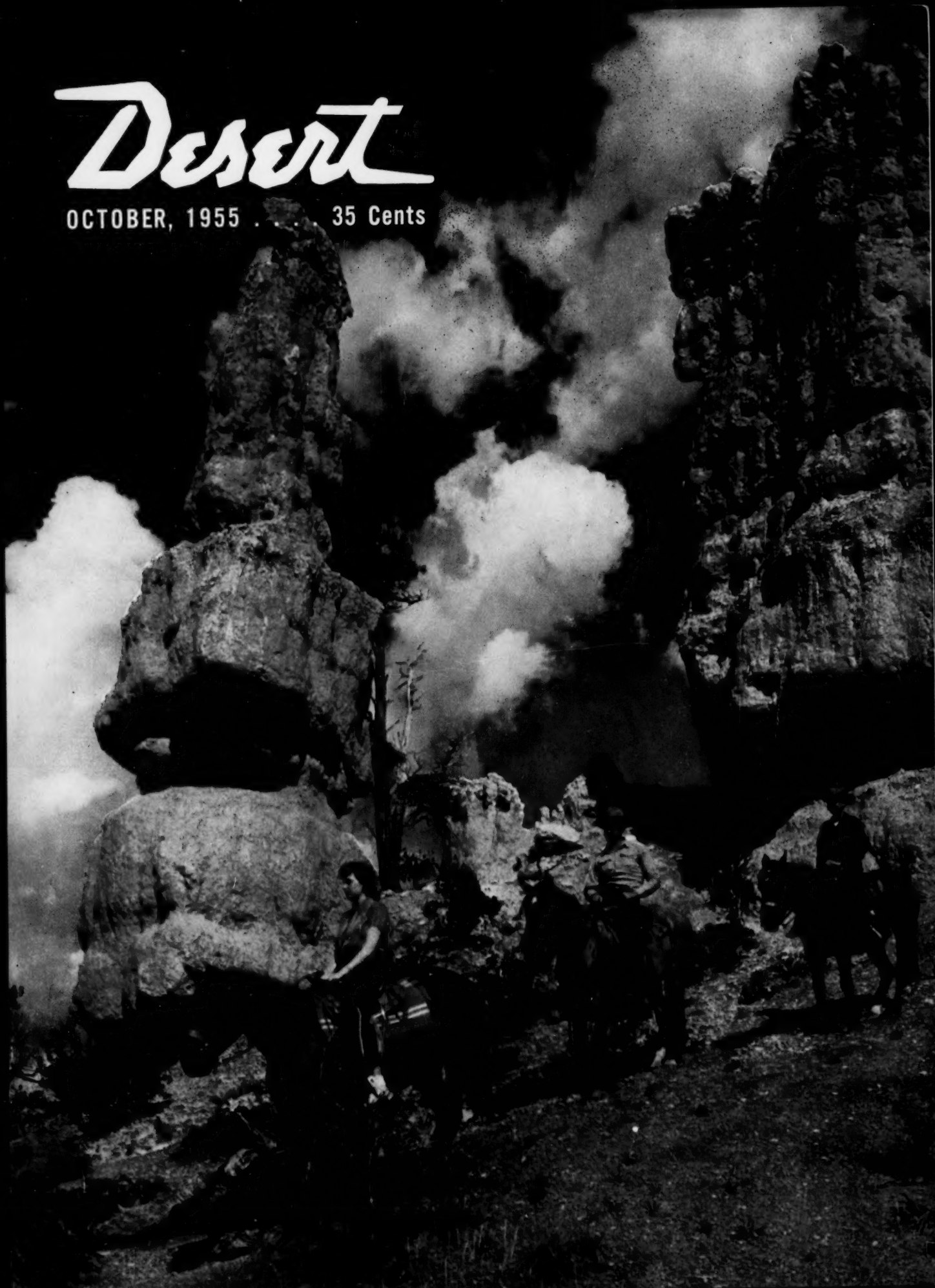
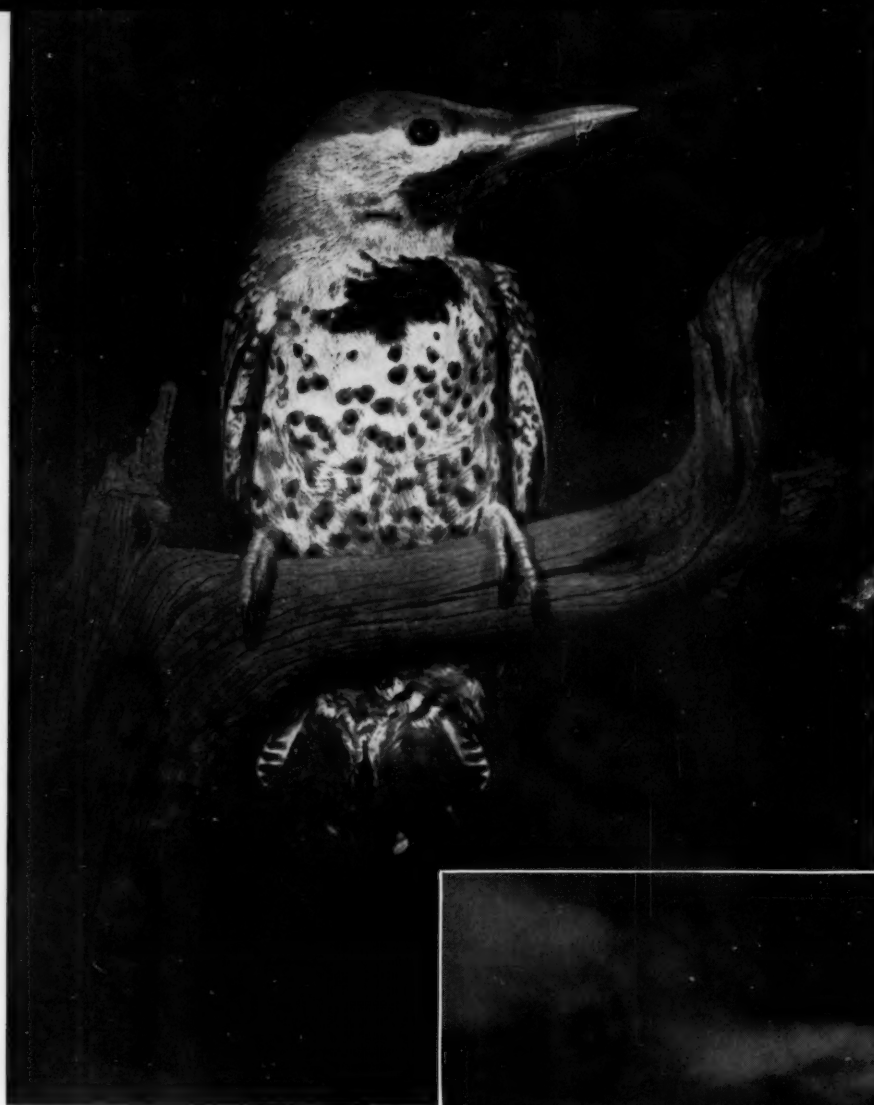


# Desert

OCTOBER, 1955 . . . . . 35 Cents





### ***Red-Shafted Flicker***

Dead juniper limb provides a perch for this Red-Shafted Flicker photographed by Robert Leatherman of San Bernardino, California, first prize winner of the August Picture-of-the-month contest. Leatherman used a 2¼ x 3¼ Crown Graphic, Ektar Lens at f:22, 1/5000 second, strcbe light.

## ***Pictures of the Month***

### ***Desert Road***

A curving dirt road through the teeming desert near his home won second prize in the contest for Robert Riddell, Jr., of Tucson, Arizona. Picture taken with a 4x5 Speed Graphic camera with Ilex lens, Super XX film, yellow filter, f:22, 1/25 second.



## DESERT CALENDAR

September 24-October 2—New Mexico State Fair, Albuquerque, New Mexico.

September 29-October 1—54th Annual International Mining Days Celebration, El Paso, Texas.

October 1-3—Cochise County Fair, Douglas, Arizona.

October 4—Annual Fiesta, Nambé Pueblo, Albuquerque, New Mexico.

October 5-8—Centennial Celebration and 18th Annual Pioneer Days, Twentynine Palms, California.

October 8-9—20-30 Club World Championship Junior Rodeo, Phoenix, Arizona.

October 9—Second Annual Colorado River Cruise, Blythe, California.

October 14-16—Desert Empire Fair, Ridgecrest, California.

October 15—Centennial Celebration, Ajo, Arizona.

October 15-16—Blythe Rodeo, Blythe, California.

October 20-23—Pima County Fair, Tucson, Arizona.

October 21-23—Helldorado Celebration, Tombstone, Arizona.

October 21-23—Western Celebration, sponsored by Los Compadres, Palm Springs, California.

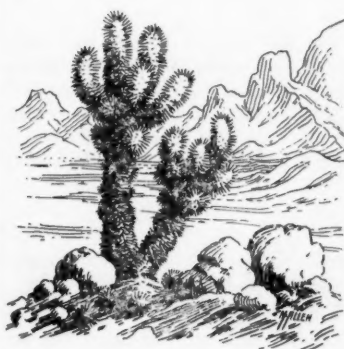
October 23-28—Clovis Cattle Festival, Clovis, New Mexico.

October 29-31—Carson City Rodeo, Carson City, Nevada.

October 29-November 6—Ryder Cup Golf Matches, Thunderbird Golf Course, Palm Springs, California.

October 31-November 1—World Symposium on Applied Solar Energy, Phoenix, Arizona.

Month of October—Cave paintings and petroglyph reproductions by Charles LaMonk, Southwest Museum, Los Angeles, California.



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*Top photograph shows highly mineralized Cargo Muchacho Mountains as seen from the sand dunes of the Algodones. The prospector was heading for the Cargo Muchachos when he found the gold nuggets in the dunes. Ogilby, to which he barely made his way alive, lies just below the highest peak in the Cargos. Bottom—The great wall of sand mountains, six miles wide and 40 miles long, has long been a barrier across the southern route to California.*

## *Lost Gold of the Great Dunes . . .*

By HAROLD O. WEIGHT  
Photographs by the Author  
Map by Norton Allen

**O.** T. WILLIS looked a little sheepish as he brought a stranger into G. A. Rodenbaugh's general store at Winterhaven, just across the Colorado River from Yuma, late in 1917.

"We want outfitting for a few weeks prospecting, Rody," he said. He hesitated, then made a clean breast of it: "We're going to hunt gold nuggets in the sand dunes."

"Nuggets?" Rodenbaugh repeated.

In 1917 a prospector was crossing the Algodones Dunes in southeastern California on his way to the Cargo Muchacho Mountains when he lost his way in a blinding sand storm. Somehow he got out of it with his life—and 17 pounds of gold nuggets he had picked up on a bed of hardpan during that hazardous crossing. The experience left him a dying man, but before his death he drew a map to his gold discovery and gave it to a friend.

"In the big dunes?" He knew Willis, a Yuma well-driller, a good man and an honest one. But the stranger didn't look as if he knew anything about gold or prospecting or the desert.

The stranger nodded aggressively. "In a pass through the dunes. I've seen some of them, and I've got a

map." Then he closed his mouth tightly, as if he'd said too much.

Rodenbaugh shrugged and started filling their order. He knew the tradition of the prospector, that gold was where you found it. That was the old-timers' belief—and also an excuse to go wandering through parts of the des-



ert where geologists and mineralogists were dogmatic that gold should not exist. Often enough, the prospector proved his theory and the expert reluctantly recorded another condition under which gold could properly occur.

But gold in the Algodones dunes! Not even the most sun-demented old-timer looked for metals there. Those tawny mountains — the Sahara of America—were the ghost-sands of a vanished inland sea and of a forgotten extension of the Gulf of California. Mysterious, shining, deadly and waterless, they twisted northwestward from the Mexican border along the eastern edge of the Imperial Valley, piled there by the prevailing winds in a colossal dry-washing operation not dissimilar to the way Sonoran miners panned dry desert placers.

Common sense and experience told the old time prospector that if there had been gold where all that sand originated, it was still there—placered and left behind by the winds which had brought the lighter materials to build the Algodones. And it was reasonable to suppose any gold that had been on the mesa where the dunes built up was buried deep and constantly being buried deeper beneath the sand as the winds continued their erratic placering from the southwest, west and northwest.

Later Rodenbaugh learned why the stranger, who came from Los Angeles, was so confident there was gold in the dunes. In June, 1917, a friend of the stranger had left Mexicali with a pack burro for a prospecting tour of the Cargo Muchacho Mountains, about 50

miles to the east. Reaching the western edge of the big dunes at the old county well — now Gray's — he had turned north instead of following the plank road, laid through the sand hills along Highway Pass a year or two before. Some distance north of the well he struck easterly through what appeared to be a low pass through the sand mountains. As Rodenbaugh remembers the story, this was one mile north of Gray's Well. As Carl Walker of Gold Rock Ranch heard it, it was the second pass north of Highway Pass.

Until you have attempted to cross the Algodones on foot, you can have no real conception of their enormous extent or of the immense size of some of the individual sand mountains. While hunting the pass this prospector followed I have hiked for half a day without reaching a goal which seemed no more than two miles away at the most. William P. Blake, a careful and accurate geologist, underestimated their size woefully when he saw them only from their southern end during the Pacific Railroad Survey of California in 1853.

He reported that they formed a belt less than a mile wide and about 20 in length, that they seldom reached a height of more than 60 feet, and that most of the high ones were underlaid by a high bank of clay and gravel, with the sand a mere covering. Actually they are from two to more than six miles wide and more than 40 long. Individual all-sand mountains rise more than 300 feet above mesa level.

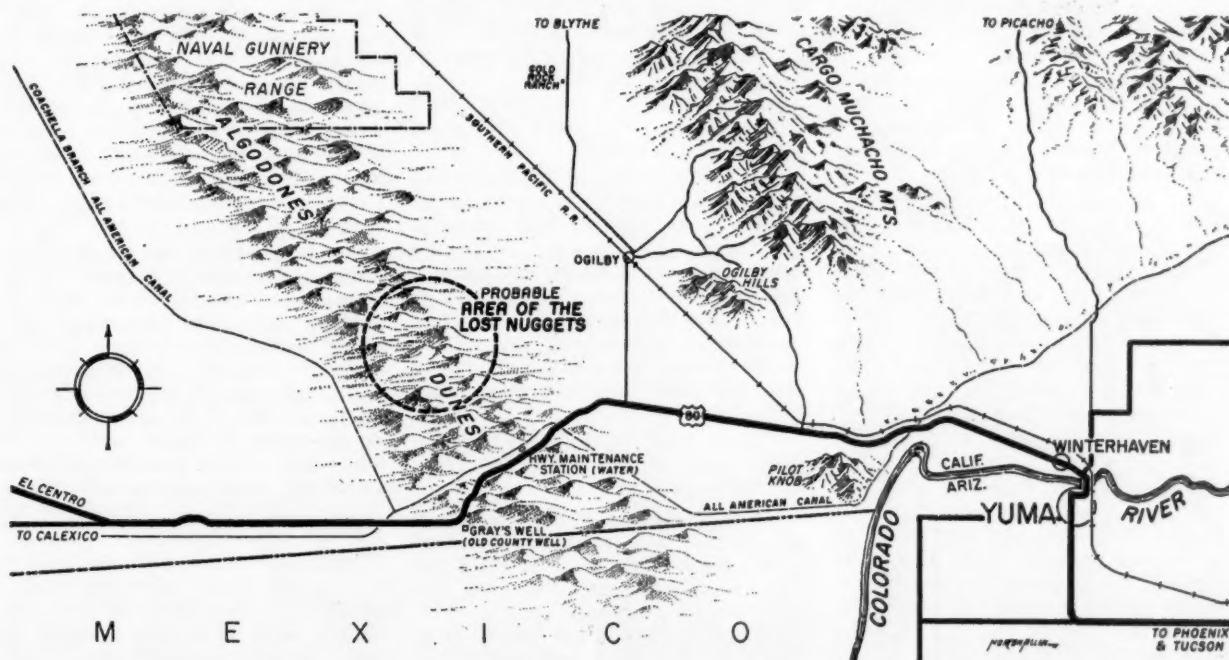
In the summer months crossing them was especially hazardous and exhaust-

ing. Newspapers of the early 1900s frequently carried accounts of the rescue of men who had lost their way between Yuma and the Imperial Valley, found naked, crazed with thirst, crawling across the dunes. When a sandstorm rose the Algodones became a biting, choking, burning hell, impassable for man, animal or machine. Then a lost traveler was not likely to be found again—alive or dead.

Little detail remains of the ordeal of that prospector when he entered the Algodones alone in blazing June weather. A sand storm must have hit him, for he lost his burro and the animal was never found. He lost his water, his food and his equipment. He must have wandered for some time, because he was nearly dead of thirst when he made his way into the little Southern Pacific Railroad station of Ogilby, near the foot of the Cargo Muchachos.

But he had retained his senses and he remembered that sometime during the torments of that crossing, probably after he had lost his burro and after the wind had died down, he stumbled through a pass or open pocket in the high dunes. Under his feet the ground was firm—a bed of hard pan or caliche. Scattered on that hardpan were golden nuggets. He picked up 17 pounds of those nuggets and clung to them all the way in to Ogilby.

The telegraph operator at Ogilby cared for the prospector until he was strong enough to be put on a train for Los Angeles. According to the story, which I have not been able to verify, the telegrapher was rewarded with two of the largest nuggets. The prospector





*Wheeled vehicles first crossed the great dunes by means of a plank roadway laid on the sand and dug out and relaid after every storm. The roadway was so narrow that a strip for passing, plank at right, was provided every quarter mile or so.*

reached Los Angeles safely with the gold which even at its old rate was worth more than \$5000. But he did not recover from his ordeal in the dunes.

Before he died, he drew a map of the location of the nuggets, as well as he could remember it. The man he gave it to, and who came down to hunt for the gold that same year, was his doctor according to one story, a carpenter friend according to another. His name has been forgotten.

At any rate, he came to the dunes with faith that the gold was there and that enough remained to make an expensive search worth while. From Winterhaven he and Willis took the then main road up the mesa between the Cargo Muchachos and the Ogilby Hills, crossing the railroad at Ogilby. Then they left roads behind and headed southwest toward the heart of the great dunes, some six miles away, seeking to back-track the prospector's trail.

For two miles they had a straight run down one of the long flat mesa-fingers. Then came soft sections, mined by rodent colonies, and then they reached the transverse, sandy washes which penetrate the lower sand hills.

For this terrain the Los Angeles man had hired Willis' truck, an old

Ford with oversize tires. Probably it was the best vehicle in the Yuma region for attempting such a sandy trail, and Willis did all right for a while. He worked a slow and steady way down the shallow, tree-lined arroyos between the ridged foothills of sand. He made it safely through the area shown as "Dry Lake" on the old maps. In fact, wherever water had stood there was a hard surface which made the going safe, though rough.

But finally an area of low dunes had to be crossed in order to reach another shallow wash, spotted with creosote, palo verde and ironwood, which appeared to lead toward the pass the Los Angeles man wanted to investigate first. After traveling a hundred feet the truck's back wheels dropped to their hubs and spun in a soft spot in the blow sand. The high dunes were still miles away.

"From here we can either lay a brush road, or we can walk," Willis told his employer.

They decided to walk. Walking is an effective way to explore the sand dunes, but it could consume a lifetime. The Los Angeles man found no nuggets. But he came back again in 1918, and again in 1919. Each time he hired Willis and his truck, and outfitted at

Rodenbaugh's. Each time, trying from all possible angles, he searched in the same section of sand hills north of present Highway 80.

He did not find the lost passage through the dunes plated with golden nuggets, and after the third try he did not appear in Winterhaven again. Apparently he had convinced Willis there was substance to the story, for the well-driller reportedly made later searches for the gold himself. These hunts appear to have been the last made for the phantom nuggets, except for my recent tentative efforts.

To those who do not know the Algodones, the idea of passes with cemented floors in the heart of those miles of unchecked blow sand might sound more fantastic than the gold nuggets. Strangely, as aerial photos show, the areas of highest dunes are pocketed with large openings which do go down to level, creosote-bush flats which in some cases are below the elevation of the surrounding mesa. Highway Pass is an example of this surprising phenomenon.

There are clay and caliche beds all through the dunes wherever pockets of rainwater have collected. The evaporating water apparently cements the fine clay with the calcium carbonate

from the sand, and lays it down for its own water-tight lake-bed. Through the centuries some of these clay beds have become many feet thick and support big ironwood and palo verde trees.

Rodenbaugh, who is now postmaster at Winterhaven, and Ed Rochester who has prospected and placered widely in the lower Colorado Desert, are agreed that gold nuggets could not have occurred naturally in the big dunes. If gold is there, they say, it must have come somehow from the rich placers of the nearby Cargo Muchachos, which have been worked since before records were kept.

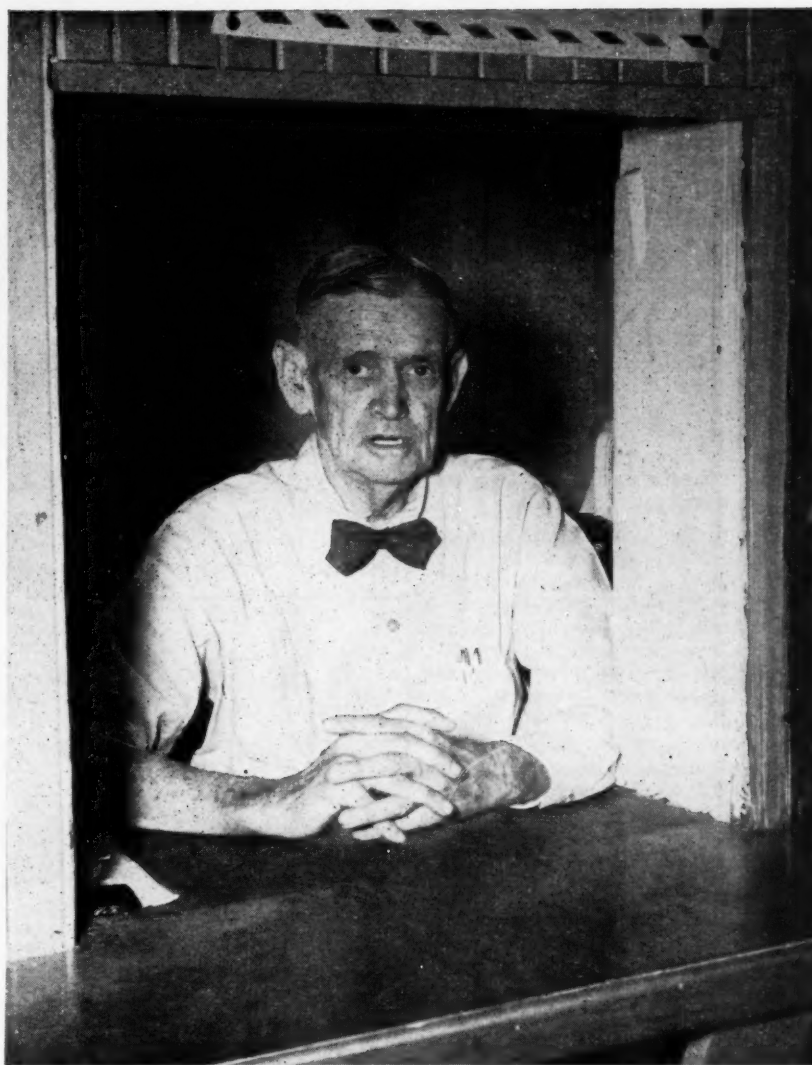
How? There is a legend that farther to the north, in the Chocolates, the Indians once raided a Spanish pack-train of gold, and threw the gold into a badger hole. Perhaps the nuggets in the dunes came from a similar raid. Perhaps they were the hidden loot from the robbery of one of the Cargo Muchacho mines, or of the miners. Perhaps some party which had placered the gold perished in a sand storm while transporting it through the dunes.

But I wonder—is it impossible the nuggets originated near the spot where the prospector found them? The Cargo Muchachos, which have produced millions in gold, lie not ten miles to the east. Another ten miles eastward are the Picacho Mountains and their fabulous ledges and placers. Might not a low outlier of the Cargo Muchachos have outcropped once into the area of the dunes, with a gold vein whose eroding nuggets were washed onto a caliche flat below, to be covered or uncovered, as the wind willed?

The lost nuggets are only one mystery among myriad legends of the Algodones dunes. There have been tales of Spanish armor found in hidden coves; of weapons of our own army a century ago; of wagons and relics of the Fortyniners. All these things are possible. Spanish warriors, U. S. Dragoons, and gold hunters all battled the dunes, and some of them lost.

Even without such luring possibilities, these sand mountains are a beauty and a wonder of the desert. Hollywood long ago learned that and most Saharan and Foreign Legion motion pictures are photographed at the dunes' southern end in the Buttercup Valley vicinity. It is a strange and weird sensation to come across the "ruin" of an old mission or an Algerian fort among the lonesome dunes.

But it is no less a sensation just to go out among them until you see nothing but rippled sand and blue sky and hear nothing but the wind. William Blake described that feeling a century ago: "While one penetrates among these round sand hills, so that every other object is shut out from view,



*G. A. Rodenbaugh, now postmaster of Winterhaven, learned the story of the lost nuggets of the Algodones from the man who outfitted at his store in 1917-19 to search for them.*

they seem like gigantic snow-drifts; and the low, rustling sound, produced by the moving sand grains is very similar to that made by hard, dry snow, when driven before a high wind."

Blake also exclaimed over the beauty of the individual sand gains seen under a microscope, perfect spheres of white, red, black, green and brown, most of them translucent, some transparent. "All of the little asperities and sharp edges are seen to be worn away," he wrote. "By bringing the eye closely to the ground, especially where gravel is abundant, as in such places the grains are much larger than on the sand hills, I obtained a great variety of little polished spheres of quartz, agate, garnet, and a transparent green materials, probably chrysolite."

"Algodones," Spanish for "cotton plants," seems a strange title for these

towering mountains of sand. Blake gives it as the name of the Indian village on the Colorado where the dunes were first noticeable. It appears that the tribe which once inhabited this village suffered a score of variations in spelling during its known history. But Jesuit Padre Eusebio Kino designated them as "Alchedumas" back in 1699. It was inevitable that that name, in time, would be forcibly converted to similar sounding "Algodones," which had meaning. What is fascinating is that later authoritative word-smiths should seek to rationalize its application to the sand hills, explaining that it was because their rounded white tops look like cotton-bolls.

Since the first European—probably Melchior Diaz in 1540—was brought up short by the soft but savage barrier of the Algodones, passage through



them on foot or horseback, or by wheel, has been a baffling problem. Diaz was turned southward. In 1771 Padre Garces was balked and sent wandering. Juan Bautista de Anza was forced into a great southward arc on his expeditions to California from 1774 to 1776.

U. S. General Kearny in 1846 and Colonel Cooke and the Mormon Battalion in 1847 were forced to detour around the dunes. The dunes turned the great, impatient tide of the California Goldrushers and cost lives or property of the too-eager ones who sought a direct crossing. Because of them the famed Butterfield Stages swung below the international border, and the first canals bringing Colorado River water to the Imperial Valley had to be cut through Mexican soil.

Not until the teens of this century was a wheelway webbed across the Algodones — a narrow roadway of thick planking, maintained by constantly digging its sections from under drifts or filling in support that the wind had whisked away. In 1926 a paved highway was completed through the dunes, but not until 1940 did irrigation water flow through the sand mountains in an even greater engineering achievement—the All-American Canal.

North of the highway and canal the Algodones remain pathless and untamed. Today's explorers, though, can command easier means of access. Vehicles have been built — short-coupled little hybrids with huge, soft tires—which can travel through even the big dunes. After a rain, four-wheel-drives can make considerable headway. Even when the sand is dry they can approach closer than Willis did with his truck—and with less digging out.

But no matter how far wheels carry you into the dunes, you will come to the place where you must walk. In cool, windless weather it is a wonderful experience. And no matter how far you do walk, there will be vales and hollows ahead that human feet have never touched; many they never will touch. The tracks which you made yesterday are gone today. Tomorrow even the spot where you walked may be buried a dozen feet, never to emerge again.

Such may have been the fate of the lost golden nuggets. Whether they weathered from some vanished ledge or spilled from dried rawhide bags or rotted canvas sacks which fell from dead men's hands, they may now be buried forever in the heart of a hundred-foot mountain of sand. Only the great dunes know today—and who can fathom the silvery whispering of their voices?

## '49ers make plans for Annual Encampment in Death Valley

More people than ever before will participate in this year's Death Valley Encampment, and plans are well underway to make the November 10-13 affair the greatest in the event's seven-year history, officials of the Death Valley '49ers, Encampment sponsor, declared. Seven thousand persons pitched tents or parked trailers at the Encampment last year, but additional thousands are being planned for by the 1955 Encampment committee.

The unique entertainment is admission-free, Dr. Thomas Clements, head of the USC geology department and president of the '49er organization said. "It is free to everyone who wants

to spend unforgettable nights under the desert stars and thrill-packed days exploring the scenic and geologic wonders of the Valley. The only charges made are for the various official breakfasts and luncheons. These include an Artists' Breakfast, an Authors' Breakfast, a Photographers' Breakfast, and a luncheon at Stove Pipe Wells," he added.

Four counties, Los Angeles, San Bernardino, Inyo and Kern cooperate with the '49ers in making the affair possible.

The Encampment offers all a chance to live again the thrill of Pioneer days.

## Hard Rock Shorty of Death Valley



"Yep, we gotta lot o' funny birds around this Death Valley country," Hard Rock Shorty was saying. His audience was a group of Audubon society members who were making an Easter vacation tour of Death Valley in a chartered bus. Each of them had a pair of field glasses ready for an alert if any of the winged members of the desert bird fraternity came in sight.

"Lot's o' woodpeckers here," Shorty went on. "They's the ivory-billed woodpecker, the saw-billed woodpecker, the diamond-drill woodpecker, an' a lot o' others I've forgot about.

"One year Pigsaw Bill brought in a batch o' them subterranean woodpeckers from Arizony. Miners use 'em down there to drill holes in the mine tunnels fer blastin'.

"But them birds didn't like Death Valley. First chance they got they all flew back home down by Tombstone. Pigsaw got mad. 'I'll show 'em,' he said.

"He built a rock house just outside the entrance to the mine tunnel, so the birds'd have a place to feed and roost after their days' work wuz done, without gittin' away.

"Wuz a good idea all right. Only the first night in the rock cabin the birds all drilled their way through the walls and went back to Arizony.

"But the smartest of 'em all is that iron-billed woodpecker. We got acquainted with him when Pigsaw Bill brought in a lot o' sheet metal to build a powder house up near the mine on Eight Ball crick.

"The ol' iron-bills started drillin' holes in that sheet-metal right away. We couldn't figure what they wuz doin' it for. Nothing in there fer 'em to eat. Then one day we saw the answer.

"Woodpecker come divin' down out o' the sky with one o' them Panamint eagles right after it. They wuz headin' straight fer that powder house. Jest before it got there ol' iron-bill folded his wings and dived through one o' them holes. It was too late fer the eagle to stop, an' there wuz eagle feathers flyin' in the air fer half an hour—an' we had eagle meat fer dinner that night.

"Happened nearly every day, an' before them Panamint eagles killed themselves all off, Bill had enough eagle feathers to stuff three bed ticks an' a couple of pairs o' pillows."



*Towering above the other dwellers of the Southwest of 8000 B.C. is the mighty mammoth. At far right hiding in the bushes is another important member of the area—man. Diorama photograph by the Arizona State Museum.*

8000 B. C.

# Southwestern Man Against Mammoth

By BEULA M. WADSWORTH

**T**HE NOONTIME was hot in September some years ago when my brother, Wade Wadsworth, and I were on our way to Tucson, Arizona. We stopped for a picnic lunch under a shady tree in the desert not far from Naco, a small community on the Arizona-Mexico border south of Bisbee. Our trek was giving us our first feel of the Southwest desert's rolling and mountainous terrain with its low ragged growth and trees bordering the water courses.

I little thought then that years later in 1952 I was to see Naco in headlines, distinguished for being the last resting place of a rare elephant that had innocently stopped for a drink in a stream here 10,000 years ago only to meet his doom at the hands of hunters.

This sleepy little frontier town of Naco is now known as the stamping ground of adventurous, prehistoric spear throwers and big game the antiquity of which dates back centuries before the Pharaohs of Egypt, and long before Biblical history began in 4000 B.C.

How did the ancient elephant, known as the Columbian Mammoth, and the hurlers of stone-tipped spears happen to be here?

The answer is that a variety of prehistoric animals now extinct roamed this part of the world. Herds of bison, llama-like camels, meat-eating ground sloth, four-pronged horn antelope, horses and elephants were unmolested by man for perhaps a million years because man had not yet appeared in our western hemisphere.

Then, some 25,000 years ago, primitive hunting people migrated from Asia over a land-bridge across the Bering Strait into northwestern America, according to anthropologists. These aborigines possessed physical characteristics of the Asiatics — black hair, broad brown faces with high cheek bones. Certain groups continued their migration southward from the frozen north country to the warm and humid Southwest. These people became the various Indian tribes.

The Southwest was not then a dry, hot desert with scant rains as we know it today. At that time 40 inches of rain fell annually which meant a luxuriant growth on the land for wild beasts and later for man who preyed

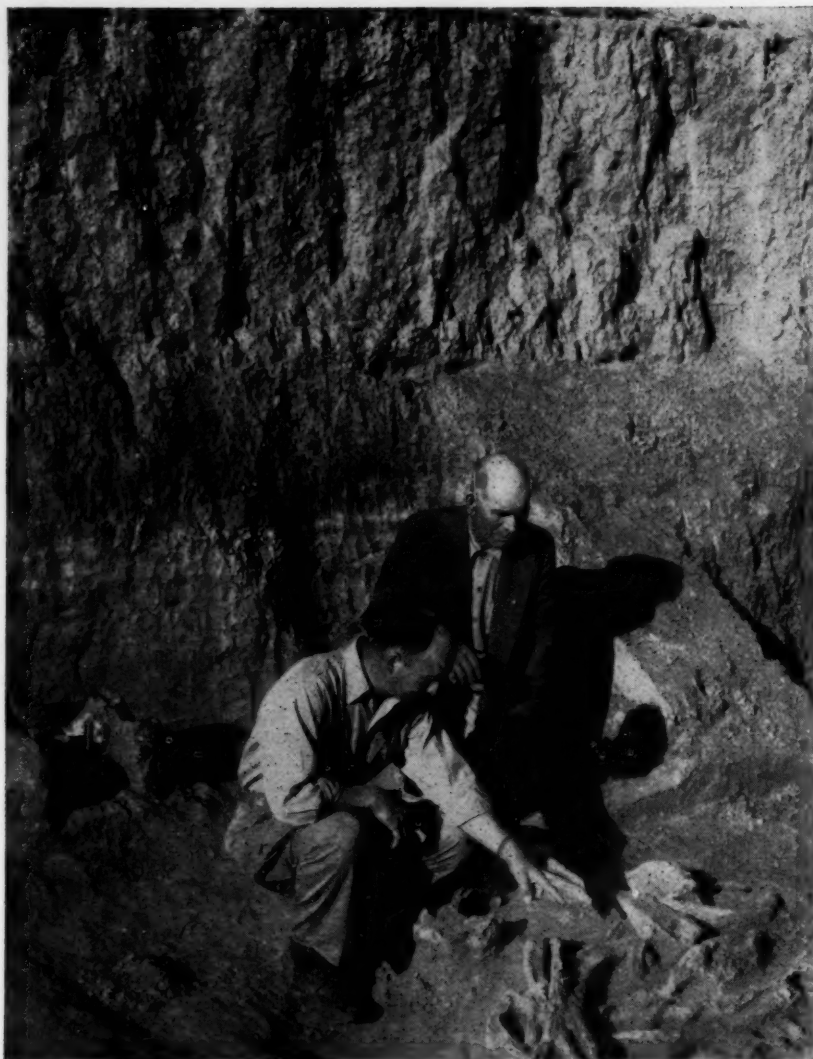
Ten thousand years ago the Southwest was not the desert we know it as today. Abundant rain turned the valleys and plateaus into luxuriant pasturages. Many animals thrived here including the Columbian Mammoth, a giant elephant. When the fossil remains of one of these elephants was found near Naco, Arizona, with eight spear points imbedded in it, scientists had conclusive proof that man too was a dweller of this ancient land.

on the animals for food. He also used their skins for clothing and bones for tools.

Fortunately in our time two amateur archeologists, much interested in learning about early man, were longtime residents of Naco. They were Fred Navarrete and his son, Marc. One day while strolling along Greenbush Creek, a branch of the San Pedro River, they caught sight of some bones projecting from the bank. They did some experimental digging and soon realized that their discovery had great scientific value. Their immediate thought was to report the matter to the Arizona State Museum at Tucson.

Dr. Emil W. Haury, director of the museum and head of the University Department of Anthropology, had done notable excavation work both in Arizona and Columbia, South America. His Associates in archeology, geology and paleontology were skilled in the techniques of excavating and preserving prehistoric remains.

The discovery of the fragile old bones of the elephant created quite a flurry of interest in the Desert Southwest, because although several complete skeletons of the species had been



*Fred Navarrete and his son, Marc, discoverers of the Naco Mammoth, at the excavation. Photograph by Arizona State Museum.*

found in America, this was the first having more than two spear points in the carcass—and here were eight imbedded among the bones of the vulnerable head and chest, leaving no doubt of their lethal effect upon the beast.

Dr. Haury later published a brochure entitled "The Naco Mammoth." The text opens with this provocative statement:

"This is a story of a hunt in two acts. Though the episodes were separated by some 10,000 years and the prize was the same animal, in both instances the hunters were successful. For the first group success meant fresh meat; for the second, fresh evidence of man's early presence in the New World."

And so it happened that the evidence they found reveals that the ancient hunters cooked the beast, as old char-

coal remains show, ate the hind quarter and left the rest. In time a change of land formation forced water to cover the still undecayed bones under eight feet of clay and silt, sealing the carcass for the many milleniums. Another change in water flow carved away the bank exposing several bones and one of the eight spear tips to inquisitive amateur and professional excavators.

The scientific recovery of the bones by Museum specialists is a story in itself. To begin with, the problem for the staff of six men became more than just removing soil with an assortment of tools to prevent damage to the bones. The bones were spongy and it became necessary to apply solutions to them for preservation through hardening. The problem meant, too, the saving of clay samples for pollen analysis to ascertain age, as well as saving charcoal samples for dating by means

of the radioactive carbon test. Keeping exact records of the work was also important. The extent and position of surviving elements of the skeleton and the exact location of the eight spear points were photographed and charted.

Now to hold all the bones securely in place for transportation to the Museum by truck, the earth within an undisturbed block enclosing the bone mass was covered first with wet newspapers, then with strips of burlap dipped in a solution of Plaster of Paris, and, finally, lumber was added to the undercut edges. Tunneling underneath made it possible to turn the mass over for further reinforcement with metal lath and a thick block of plaster. Later after the trip back to the Museum the mass was turned over to its top side and stripped of its jacket. Altogether the task required about 200 hours of a preparator's time to ready the specimen for exhibition. Data gathered, it was estimated that the original young elephant, 24 to 60 years old, must have stood ten feet high at the shoulders.

Today visitors to the museum at Tucson may see the bones of that prehistoric elephant enclosed in a huge case—bones of the fore-part of the skeleton, including the prodigious teeth. Reproductions of the spearheads are in their original places. The actual stone spear heads are arranged in front of the case for easy inspection.

Along another aisle of the museum is a 10-foot diorama constructed at a cost of more than \$6000. It shows in vivid miniature the landscape of southern Arizona 10,000 years ago with various prehistoric animals deep in the lush grass of a long-gone pastureland. Towering above the other creatures is the mighty mammoth with rounded body and sloping back, its trunk swung high in a graceful curve as if trumpeting an alarm. This diorama is the work of Sculptor Louis Paul Jonas. It portrays in imaginative detail the Arizona of aboriginal man 10,000 years ago.

#### **JANUARY 1955 ISSUE**

Many readers were disappointed last January when the supply of the January issue of *Desert* was exhausted before all orders could be filled. A limited number of the January copies are now available (newsstand returns) for those who still need that issue to complete their files. This and all other 1955 issues may be obtained at 35 cents each by writing to *Desert Magazine*, Palm Desert, California.



# They Found New Wealth in Fairview

Forty years ago Ed and Sylvia Stratton left their home in a factory town in Massachusetts and moved to the silver mining camp of Fairview, Nevada. Those were boom days. When the silver vein was worked out and others moved away, the Strattons remained —because they love the far horizons of this peaceful Nevada ghost town.

By NELL MURBARGER  
Photographs by the author  
Map by Norton Allen

"OUR FRIENDS think we're nutty as pet coons to live out here in the sticks," said Ed Stratton. "What if you get sick, or have an accident?" they ask. They wonder why we don't move to Fallon where we can have modern conveniences and fewer hardships, and be nearer to doctors and supplies.

"What do you think?" he turned to me quizzically. "Do you think we're crazy to live here?"

I couldn't answer immediately.

Ranging my eyes over the old desert ghost town of Fairview, Nevada, where Ed and Sylvia Stratton have for many years constituted the sole population, I saw there a hard and hungry land laid bare to the full fury of summer's sun and the blasts of winter. I saw a place without a single shade tree, or hedge, or vine, or one square foot of green lawn; a place more than 40 miles removed from the nearest postoffice, and totally devoid of any water save those meager drops grudgingly yielded by infrequent rains and snow.

To spend a week or even a month here would be an interesting experience; but to live here 40 years as these people had done? Frankly, I doubted it.

Interpreting my thought through my hesitation, Ed nodded. "Yes," he said, "I guess you think the same as our friends. But let me ask you something: Even with all their so-called advantages, can you show me one person living in any town or city today who has a richer peace of mind, or is more

completely happy and contented than Sylvia and myself, right here in Fairview? We enjoy the best of health, while thousands of folks our age are hobbling from one sanitarium to the next. We have the purest air in the world to breathe, and all the food we want to eat. We don't have to worry about next month's rent, and we don't have to fight traffic, noise and congestion.

"Crazy?" he repeated scornfully. "Crazy like foxes!"

If I still harbored vague stirrings of doubt it was simply because I had first met the Strattons only a few minutes earlier and hadn't had much of an opportunity to know them or their way of life.

It was Hallie Jones of the Farmhouse at Fallon who first told me of this remarkable desert couple.

"You'll have to meet Ed and Sylvia," she had said. "They're a priceless old pair! I've never known another man and woman so completely happy or so thoroughly at peace with the world."

And so we drove to Fairview, Hallie and I. We arrived to find Ed working in his garage. While Hallie watched in amusement, I stared at the Ford

truck he was servicing, shook my head and stared again.

"Does it run?" I finally asked.

"Does it run!" barked Ed Stratton like a man whose first love had been libeled. "Does it run! You oughta see that old girl pull! Comes up Fairview Canyon without even steaming and that's more'n most cars'll do!"

"Yep . . ." he gave the radiator an affectionate cuff. "She's a great old bus. Bought her brand new 35 years ago. Been drivin' 'er ever since! Only trouble she's low geared. Won't run over 25 miles an hour. But when I want speed I've got this old girl over here." Trailing us to the other side of the garage, the desert man waved toward a 1920 Paige touring car with side curtains — the "new, improved type" that opened with the doors.

"This is the baby for speed! Had 'er up to 85 miles once on the salt flats 'tween here'n Fallon. Even then she was just loafin' along! Don't know how fast she'd go if I was really to let 'er out . . . and, of course, when we want to put on the dog—" Ed Stratton turned to a 1927 Cadillac limousine with still perfect upholstery and paint surface.



Sylvia and Ed Stratton, last surviving residents of Fairview, Nevada.



*The Strattons' home in Fairview. Hollyhocks in front of house are kept alive with kitchen waste water.*

"Never figured I could afford to own a Cadillac," he said. "Thought they were just for the top brass. Fellow told me I was all wrong so I bought this heap back in 1935. Driven it 20 years now, and the only repair part I've ever bought for it was one timing chain!"

Protruding from a socket in the roof of the garage was a large electric light

bulb. I remarked that I didn't know the town still boasted electricity.

"Oh, that . . ." Ed grinned sheepishly. "No, we haven't had power since the mills closed. That bulb's been up there going-on 40 years. Always figured to take it down. Just never got around to it . . ."

Pulling ourselves away from the garage and its amazing collection of

wheeled relics, we ambled down the street half a block toward the Stratton home.

Every building in Fairview now belongs to the Strattons, having been collected from various parts of town and removed to this site near the head of the canyon where they serve in sundry capacities. One of the structures we passed on our way to the house was a false-fronted frame building with a glass door.

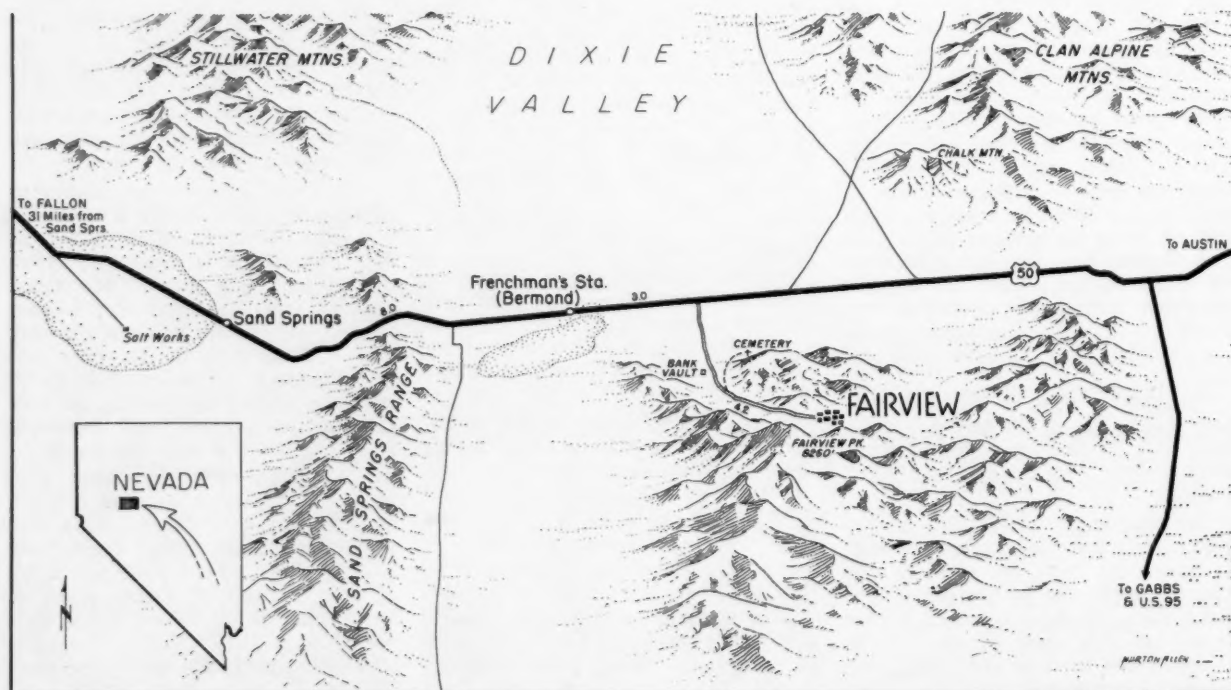
"This was the old Fairview Bank," pointed out Ed. "Maybe you noticed a big cement vault standing on the right side of the road as you entered the canyon down in Lower Town? That's where the bank stood originally. We couldn't move the vault, so we just took the bank and left the vault setting there . . ."

The silvered letters B-A-N-K were still visible on the glass of the door.

Sylvia Stratton—motherly and attractive, in a crisply-starched apron—greeted Hallie Jones warmly, and accepted me into her home like a missing daughter returned to the fold.

It was July and the day was hot, but the up-canyon breeze that fanned the open windows was fresh and cool, and our hostess had a glass pitcher of ice-cold lemonade waiting for us—the ice made in a mechanical refrigerator operated by kerosene.

The living room of the Stratton home was immaculate and might have been lifted intact from the pages of an 1890 issue of the Ladies' Home Journal. Every window was framed in



snowy white curtains, and over the glass portion of the front door hung an old-fashioned hand-crocheted panel finished in tassels. There were old pictures on the walls, doilies and embroidered scarves and little knick-knacks on every table and shelf, and crocheted tidies and fancy sofa pillows on the rocking chairs. Just to be sitting in that pleasantly quiet old room, feeling the cool breeze through the windows and drinking lemonade was like stepping back into a vanishing world of sanity and gentility.

It was necessary that Hallie Jones return to Fallon that evening but like *The Man Who Came to Dinner* I remained with the Strattons. The old bank building—since remodeled into living quarters—was assigned to me as my temporary home, and for a little while I became a bonafide resident of Fairview, Nevada.

Visiting that night with Ed and Sylvia I gradually learned the story of their lives and what had brought them—40 years before—to this outpost of civilization.

Ed Stratton had been born on Buzzards Bay, New Bedford, Massachusetts—for a hundred years the whaling capital of America. Almost the first sound his ears had known had been the thunder of surf breaking on New England's rocky shore. As a boy and young man he moved through a world of tall ships, salt-rimed adventure and iron men who spoke the hard language of the sea.

With the gradual decline of the whaling industry New Bedford became an important industrial city and Ed, after finishing school, started to work in a cotton mill. There he eventually rose to the position of superintendent.

"Sylvia and I were married in 1910," he recalled. "We were living in a fine home, I was getting a paycheck this long — " measuring a length close to his elbow — "And weighed 240 pounds!" finished his wife. Ed now tips the scales at a wiry 150.

Meanwhile, in 1906, a fabulous mining strike had been made in Nevada at a place called Fairview. In 1914 Ed took a leave of absence from his mill job and journeyed West to check on some family mining investments there.

Arriving at Fairview, 40 years ago, he found a bustling frontier city with big mercantile stores, a bank, hotel, weekly newspaper, *The Fairview News*, assay offices, drug stores, meat markets, and 27 saloons. The miners' union hall and a big dance hall had burned down only three days before his arrival but the town was full of money and everything was going full blast.

Remaining at Fairview only long

enough to transact his assigned business, Ed returned to New Bedford.

"But I fooled 'em," he laughed. "I didn't go back to take my old job at the mill—I went back to get my wife. We were moving to Fairview to live."

Three years passed and with them passed Fairview's boom. By 1917 the mines and mills and business houses were closing. Each year thereafter saw more persons moving away than were coming in. Eventually the only residents left in the town were Ed and Sylvia Stratton and a few lessees working the Nevada Hills mine.

Time brought a cooperative farm colony to Dixie Valley a few miles to the north and a majority of Fairview's buildings betook themselves to this new location—either by right of purchase or by "midnight requisition." Other buildings were moved to Fallon.

Finally, all that remained of the one-time boom camp were the several structures now owned by the Strattons, the old bank vault, a great many old cellars and broken foundations, 11 graves in a sun-scorched cemetery, and the silent mills that so briefly had served the Dromedary Hump and Nevada Hills mines.

"I wish you could have seen the Nevada Hills mill!" said Ed. "It was a 20-stamp mill, built in 1911, and a mining journal of that day called it 'the finest ore mill in the world with exception of one British-owned mill in South Africa.' Ever hear how the Nevada Hills mine was discovered?" I shook my head.

The region around Fairview Peak, he explained, had been used for many years as a winter sheep range, some 35,000 sheep still being grazed in here

*Cement vault that served the First Bank of Fairview still stands in Lower Town. The bank building was moved to the head of the canyon where the Strattons now use it as a guest cottage.*





annually. One autumn, many years ago, a camp tender for a big sheep outfit made camp on the west slope of Fairview Peak and while digging a hole for his Dutch oven struck some rock of a rather peculiar texture. Some time later the man took several sam-

ples of this rock down to Frenchman's Station on the old stage road about seven miles distant. Exhibiting the rock to the owner of the station he asked if it was of any value.

"Frenchy glanced at it and said it was no good and tossed it on the

counter. If it wasn't any good the sheepherder didn't want it and when he left Frenchy's the rock was still laying there.

"Time passed. One day three mining engineers stopped at Frenchy's on their way from Reno to Ely. Noticing the rock samples they asked about them. Frenchy said some "crazy sheepherder" had brought the stuff down from Fairview Peak. The fellows casually asked if they might have the samples and Frenchy said, "Sure! Take 'em along, if they're any good to you!"

"The men turned around and went back to Reno and had the samples assayed. That "no good" rock proved to be hornsilver, running \$10,000 to the ton! The fellows burned up the road getting back to Frenchman's Station but the sheepherder by then had left the country and no one knew where the ore had been found. Everyone started hunting places where sheep camps had been made and holes dug for Dutch ovens. Finally the campsite was found where the fire hole had been picked out of almost solid silver!

"And that," said Ed, "was the beginning of the fabulous Nevada Hills! Originally the deposit consisted of a vein 150 feet deep and 18 inches to four feet wide and from that ore dike was taken more than \$7,000,000 worth of silver! This part of the mine was about worked out when I arrived here. At that time they were letting miners down into the crack in boatswain's chairs equipped with only a bucket and hand pick. They were literally scraping the last of the hornsilver from the walls. If a man got 25 pounds of ore in a day it was considered good because whatever he got was almost pure silver . . ."

The Nevada Hills, throughout its heyday of production, was operated by George Wingfield and Associates, of Reno. Under this tenure of ownership which terminated about 1918, the mine yielded \$10,000,000 in gold and silver at a ratio of 100 ounces of silver to each ounce of gold. Eventually the ore appeared to be worked out and the big mill closed in 1917. Its machinery went to various purchasers and the building itself was ultimately auctioned by the state for delinquent taxes.

The big red mill of the Dromedary Hump mine — original cause of the Strattons' move to Fairview — still stands on the hill overlooking town. Inoperative since 1917, the milling machinery was long ago sold for use elsewhere and only the shell of the building and the old mine shaft remain.

"The old mine shaft is 600 feet deep," said Ed. "Sound as a dollar and not a drop of water in it."

## Desert Quiz:

The Quiz editor has picked a wide range of subjects for this month's test of your desert knowledge. The questions range through history, botany, geology, geography, current events, Indians and the lore of the desert country. If you answer 12 to 14 correctly that is a fair score, 15 to 17 is good, 18 or better is excellent. A score of 20 is like answering the \$64 question—without getting the \$64. Answers are on page 44.

- 1—The 20-mule teams of early Death Valley history were associated mainly with the mining of — Gold\_\_\_\_. Silver\_\_\_\_. Borax\_\_\_\_. Gypsum\_\_\_\_.
- 2—An Indian kiva is used mainly for — Ceremonial purposes\_\_\_\_. Storage of food\_\_\_\_. Lookout against marauders\_\_\_\_. Confinement of prisoners\_\_\_\_.
- 3—If your car was stuck in the desert sand and you had neither shovel nor axe, and only four kinds of shrubs were available to put under the wheels for traction, you would probably pick — Bisnaga\_\_\_\_. Ocotillo\_\_\_\_. Creosote\_\_\_\_. Cholla\_\_\_\_.
- 4—In the lore of the desert the name Breyfogle is associated with — Railroad building\_\_\_\_. Lost mines\_\_\_\_. Navigation of the Colorado River\_\_\_\_. War with the Apaches\_\_\_\_.
- 5—Archeologist who originated the tree-ring method of dating ancient Indian dwellings was—Douglass\_\_\_\_. Bandelier\_\_\_\_. Colton\_\_\_\_. Harrington\_\_\_\_.
- 6—The lumbering town of McNary draws its timber from—Harqua Hala Mountains\_\_\_\_. Wasatch Mountains\_\_\_\_. Sangre de Cristo Range\_\_\_\_. White Mountains of Arizona\_\_\_\_.
- 7—The famous Goosenecks are in the—Gila River\_\_\_\_. Little Colorado River\_\_\_\_. San Juan River\_\_\_\_. Rio Grande\_\_\_\_.
- 8—If you wanted more information about the Pitahaya, you would ask the librarian for a book on—Reptiles\_\_\_\_. Desert rodents\_\_\_\_. Indian weapons\_\_\_\_. Cacti\_\_\_\_.
- 9—Los Alamos, New Mexico, frequently appears in the news in connection with — Atomic energy development\_\_\_\_. Gold mining\_\_\_\_. Discovery of oil\_\_\_\_. Installation of a powerful new telescope\_\_\_\_.
- 10—Crystals most commonly found in geodes are—Quartz\_\_\_\_. Calcite\_\_\_\_. Feldspar\_\_\_\_. Tourmaline\_\_\_\_.
- 11—Walkara, the Indian chief, was a—Ute\_\_\_\_. Apache\_\_\_\_. Hopi\_\_\_\_. Pima\_\_\_\_.
- 12—Minerva Hamilton Hoyt is remembered by desert people especially for her efforts in behalf of — Historical research\_\_\_\_. Conservation\_\_\_\_. Indian welfare\_\_\_\_. Propagation of spineless cactus\_\_\_\_.
- 13—Largest in area is—Arizona\_\_\_\_. Nevada\_\_\_\_. Utah\_\_\_\_. New Mexico\_\_\_\_.
- 14—If you wanted to communicate with the Commissioner of Indian Affairs you would address your letter to — Douglas McKay\_\_\_\_. Conrad L. Wirth\_\_\_\_. Glenn L. Emmons\_\_\_\_. R. E. McArdle\_\_\_\_.
- 15—The proposed Echo Park dam which recently has been the object of much controversy, is designed to be built in—San Juan River\_\_\_\_. Colorado River\_\_\_\_. Green River\_\_\_\_. Rio Grande\_\_\_\_.
- 16—Palm Springs, California, is situated at the base of the—Panamint Mountains\_\_\_\_. San Jacinto Mountains\_\_\_\_. Chocolate Mountains\_\_\_\_. San Ysidro Mountains\_\_\_\_.
- 17—Phantom Ranch is located in—Death Valley\_\_\_\_. Monument Valley\_\_\_\_. Grand Canyon\_\_\_\_. Salt River Valley\_\_\_\_.
- 18—Barry Goldwater is a U. S. Senator from—California\_\_\_\_. Utah\_\_\_\_. Nevada\_\_\_\_. Arizona\_\_\_\_.
- 19—Havasut Canyon is the home of the—Supai Indians\_\_\_\_. Pima Indians\_\_\_\_. Papago Indians\_\_\_\_. Shivwits Indians\_\_\_\_.
- 20—Source of most of the flagstone used in Arizona and Southern California is the area around—Las Vegas, Nevada\_\_\_\_. St. George, Utah\_\_\_\_. Miami, Arizona\_\_\_\_. Ashfork, Arizona\_\_\_\_.

This brought to mind the fact that nowhere around camp had I seen anything that resembled a source of water. When I asked Ed about it he explained that in the early days all water for the town had been hauled from Westgate by teams. Later, when the Nevada Hills mill was built, the company piped it from that same source, eight and one-half miles across the range, and made it available to the town. After the mills closed, of course, this supply was withdrawn and for a number of years the Strattons have had to depend on rain water captured on the roofs of their several cabins.

Channeled into barrels by means of troughs, the water is placed in clean, 55-gallon steel oil drums which are then tightly sealed and stored under cover. It is their annual goal to enter the dry season with not less than 1000 gallons.

In view of the staggering consumption of water by city dwellers, even 1000 gallons seemed to me woefully limited, especially since I knew that the Strattons provided drinking water for all the chukar partridges in the canyon. I asked if this piece of benevolence didn't constitute a terribly heavy drain on their meager supply.

"Yes," said Sylvia slowly. "I suppose it does since we give them about two earthen pitchers full each day. But, you know," she went on, as though explaining an elementary truth to a questioning child, "the chukars are thirsty too and since the Good Lord gave us this water it is only right that we should share with them . . ."

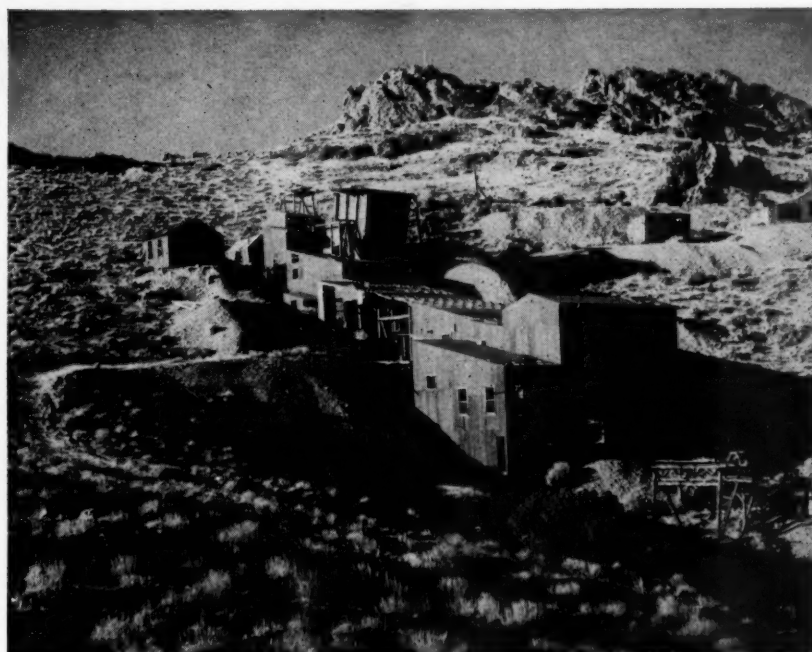
And lest some reader draw a wrong conclusion, it might be well to mention that the Strattons never kill the chukars, even in season, nor any other wild game that wanders into the canyon.

"We'd rather make pets of 'em," laughed Ed. "Sylvia even makes pets of the little gray lizards. Has 'em trained so they'll come and take food from her fingers!"

Living as far as they do from town the Strattons must necessarily buy their foodstuffs in large quantities. Fresh fruit is purchased in season and preserved in jars.

"I can all sorts of things," said Sylvia. "Everytime we go to town, Ed buys 12 or 15 pounds of little pig sausages. I place them in a pan in the oven and render out most of the fat then pack them dry in pint jars and process them in a hot water bath for six hours. Fixed in this manner they keep indefinitely without refrigeration and we think they have even better flavor than when they're cooked fresh!"

Naturally, the lack of water pre-



*Dromedary Hump mill and mine ended its operation in 1917. Upthrust in background gave mine its name.*

cludes any chance of the Strattons raising a garden or even keeping a pen of chickens or rabbits for meat.

"Besides," laughed Sylvia, "we don't want to be tied down to a flock of biddies! We don't go to town very often, but when we do we make a three-day expedition of it. We get a room at the hotel and on the first day we read our mail and visit with old friends. Next day we buy our non-perishable foods and attend to any other necessary business. On the third day we pick up perishable stuff—meat, eggs, fruit and the like—and by that time we're both worn out with city life and ready to come home!"

Sunset flung across the western sky an impossible curtain of flame and crimson and long after the sun had disappeared behind the range a golden blush still lingered on the sage-gray slopes of the higher hills.

With the cool of evening spreading over the land we sat on the front porch of the old cabin, talking softly and watching the desert make itself ready for the night. A swallowtail butterfly flitted over the little clump of red and pink hollyhocks that Sylvia keeps alive with waste water from the kitchen. A small gray lizard peered quizzically over the edge of the porch. A mother chukar trailed her brood of wildling chucks through the dust of the front yard and always to our ears came the thin, haunting whistle of mourning doves, the chirping of unseen crickets. But for these soft voices of the wild there was no sound. No planes zoom-

ing overhead, no thundering traffic nor screeching sirens, no roar of industry, no jangling telephones or barking dogs.

Our talk was of boom camps and New Bedford; of men and mines and three-masted schooners and sperm whales and sagebrush. We talked until a million bright stars were pinpointing the dark inverted bowl of the sky, and a round full moon had come to float over Fairview Peak.

"If you think that moon is big," chuckled Ed, "you oughta see our Harvest Moon when there's white frost sparkling on the ground like a zillion diamonds and the air is thin and snappy! Why city folks don't even recognize it as the moon!" He winked roguishly at his wife. "They think it's some new-fangled flying saucer that's about to crash into the house!"

"You'll have to come back and see it," said Sylvia softly. "About October. By the way," she put in, "you are coming back, aren't you?"

"Coming back?" barked Ed. "Of course she's coming back! After livin' here 40 years you think I can't recognize the symptoms? Can't you see she's already fallen head-over-heels in love with Fairview? Give her six months here and she'd be just as crazy as we are!"

I was remembering an expression Ed used in our conversation of that morning.

"Crazy?" he had said. "Crazy like foxes!"

I could understand now what he meant.

# Day in Greenwater Canyon . . .



*Petroglyphs are found on many boulders at the top of Greenwater Canyon. No one has been able to decipher these strange signs.*

**H**ISTORY INSISTS that there was an 11-piece band and a piano at Old Ryan. They called it the Death Valley Brass Band and in the evenings the men from the Lila C. Mine would gather at the boarding house across the Tonopah and Tidewater tracks from the diggings to listen to the loud—if not always harmonious—music.

Old Ryan was on the Tonopah and Tidewater tracks seven miles southwest of Death Valley Junction near the wide mouth of Greenwater Canyon.

The band and the barrooms fur-

nished about the only diversions available for the hundreds of rough and rugged miners who lived in the camp barracks. Tens of thousands of empty and broken beer and liquor bottles scattered over the wind-scoured flat at the ghost camp of Old Ryan today would indicate that during the dozen years the Lila C. was in operation, the bar-tenders were a busy lot.

We were on an exploration trip through one of the little-traveled back canyons in the Death Valley area when we found the acres of bottles.

We were looking for two things that

It was Floyd Evans' idea—a trip into Greenwater Canyon where according to grapevine reports one would find sun-purpled bottles, Indian petroglyphs, and perhaps some gemstone material. The three explorers who took the trip found all these things, and more. As Russ Leadabrand relates the story, Greenwater Canyon, just outside the Death Valley National Monument's eastern boundary, has something for everyone—from sun-dyed glass to gorgeous vistas.

By RUSS LEADABRAND  
Photographs by the author  
Map by Norton Allen

day. The first was a group of Indian petroglyph rocks, the second the site of an old bootlegger's camp we had heard of. Both were somewhere up Greenwater Canyon—outside the boundaries of the Death Valley National Monument. Collecting of any kind is not permitted in the Monument.

At the bootlegger's camp we hoped to find purple bottles—those antique, desert sun-dyed collector's items that every wasteland explorer covets.

Ernie Hovard, Pasadena police officer and inveterate desert prowler, had it all figured out. He explained his theory that morning as we bounced along the road from Furnace Creek Ranch to Greenwater Canyon.

"The bottles they were using during Prohibition were the right kind, and they've had enough time in the sun. If we find the camp we'll find the bottles."

But Floyd Evans, our guide and host, was less optimistic.

"I don't know why it is," Floyd explained, "I've visited dozens of ghost towns in the desert and seen hundreds of purple bottles, but they've all been broken. Whether tourists or the weather is responsible, I've never figured out. Finding a whole purple bottle is next to impossible."

From Death Valley Junction the highway bends south to Shoshone, 26 miles away. Following the highway south 1.3 miles from the junction we came to a dirt road that angled away from the highway through the creosote-speckled desert toward a ridge of the Greenwater Range.

This dirt road is a good one and after traveling it for 5.7 miles we came



to the ruins of the old Lila C. Mine and the ghost town of Old Ryan.

Even in the brilliant sunlight you could sense that the ghosts of those forgotten days were abroad.

A chill wind picked its way across the plain from Pyramid Peak in the brooding Funeral Mountains to the north. Dust devils beat along the old T & T road-bed and overhead a solitary raven called down a defiant challenge.

Some say that 4000 souls once lived at Old Ryan when the Lila C. was running at its peak.

The Tonopah and Tidewater Railroad was built 70-odd miles across the desert from Baker to haul the rich borax deposits from it. And then, hoping to cash in on the gold boom towns of Beatty, Rhyolite and Goldfield, the T & T ran on north. But the Nevada gold towns soon collapsed and only the colemanite shipments from the Lila C. kept the T & T running. There is little left of either the Lila C. or Old Ryan today.

The mine tunnels and dugout habitations in the mountain stand empty and only the foundations of the old mine buildings are left.

In 1913 everything usable was moved from the Lila C. to New Ryan, 20 miles to the west.

We found no end of purple bottles here, but as our host predicted, every one was broken. There were unbroken green bottles, untinted white bottles

and the familiar brown glass bottles aplenty. Was this the work of the sun and the weather—or of a small boy with an air rifle? It would be hard to tell.

It was while looking for one of these desert souvenirs, plowing through the rubble of the ghost camp, that I found a hummock covered with handsome pieces of red jasper.

I showed a fist-sized piece of the gem material to Floyd Evans. The rockhound in him came to the surface. "That's dandy stuff. Where did you find it?"

I showed him the area and in a few minutes we filled a small specimen bag. Some of the better pieces tended toward rich red jasp-agate—similar in color and quality to the handsome jasp-agate pebbles I've collected along the northern California beaches.

I forgot about purple bottles and Indian petroglyphs after covering a 20-acre area picking up jasper, jasp-agate and some attractive banded agate.

"Watch for more of the jasper float as we go up the canyon," Evans advised. "It may be washing down from somewhere high up the Canyon."

He put the car in low and we headed up the sandy wash into Greenwater Canyon. I was looking for jasper while Ernie Hovard watched for the bootlegger's camp and the petroglyphs.

We found the camp first when a bottle shining in the late morning sun

attracted our attention to it. We stopped in a gorgeously painted section of the canyon and scouted its steep slopes.

All that was left of the camp was a tangle of rusting sheet metal, baling wire and more broken bottles.

But the site looked like it had scarcely been picked over for there were plenty of unbroken bottles here—all kinds and all shapes. Ernie Hovard spotted the first one. It might once have been a large medicine bottle, but the company it had kept in more recent years indicated that it was used for less humanitarian purposes.

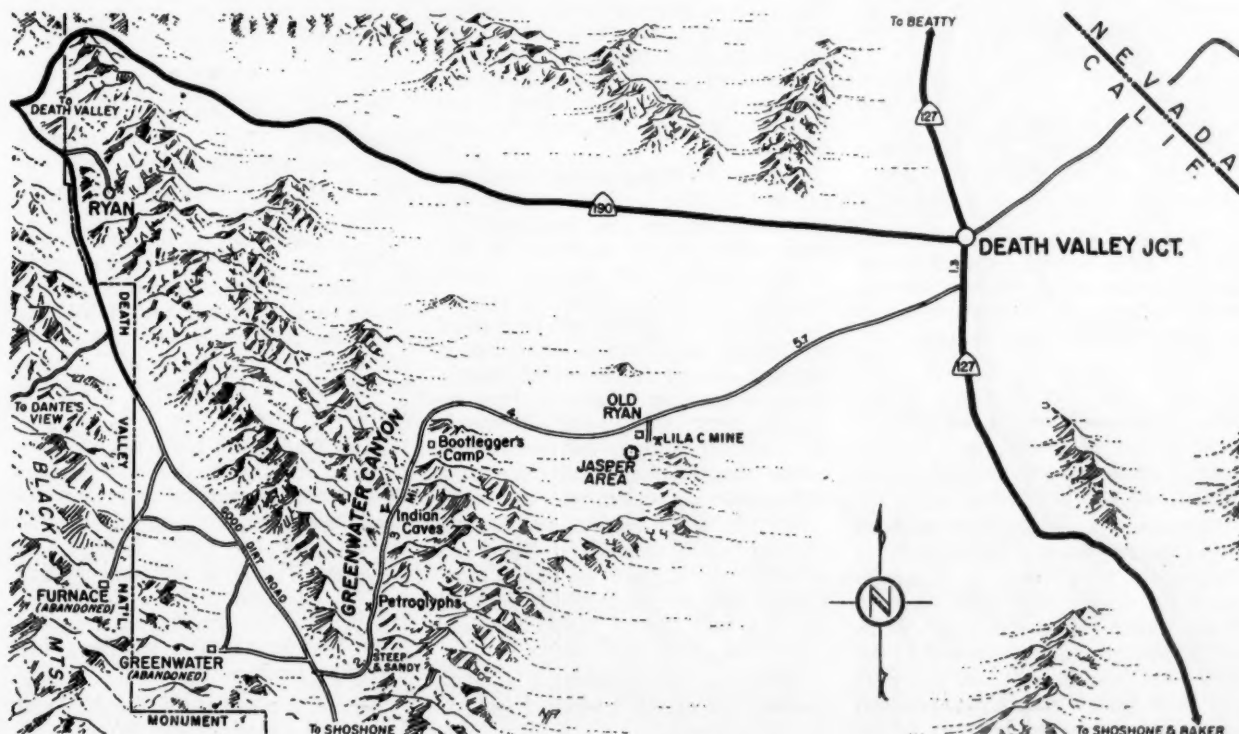
The bottle had been sun-stained a beautiful and delicate shade of purple. It was a perfect specimen.

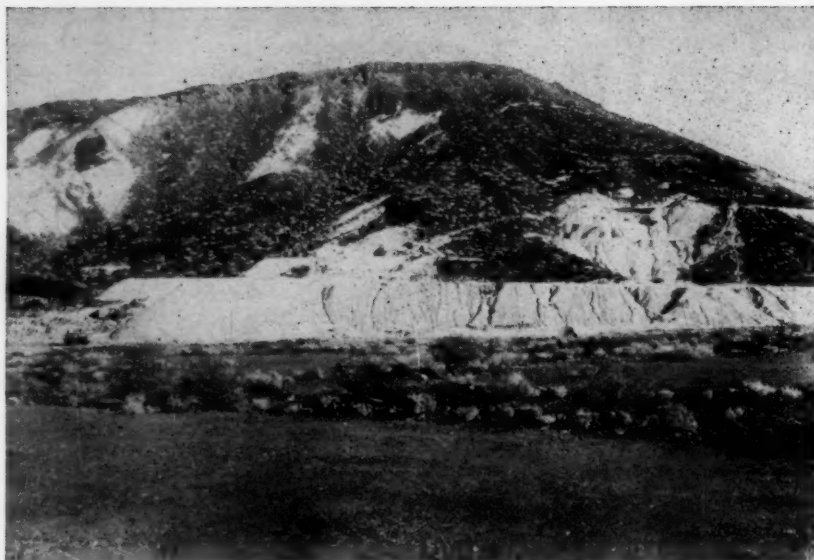
A few minutes later Evans found the second whole purple bottle amidst the litter.

Another half hour's search was unrewarding so we piled back into the car. "If we can find the petroglyphs now," Evans said as he guided the car up the narrow wash, "the day will be 100 percent successful." It was a lot to hope for.

The sandy wash rose higher and higher until we were driving between slopes spotted with patches of snow. Here, near the summit of the canyon road, we caught the first glimpse of a petroglyph scarred boulder.

We found half a dozen large boulders in the area and some smaller rocks,





Four thousand inhabitants of Old Ryan once lived at the base of this volcanic peak. Only a jungle of broken bottles and rusting cans remain. White tailings at foot of mountain are from the Lila C. borax mine.

## THE *Desert* MAGAZINE CLOSE-UPS

Raymonde Jackson, author of this month's *We Are Seeking a New Home in the Back Country*, is no stranger to the desert. As a child she lived on the family ranch near Lang, California. The nearby Sterling Borax Mine was a happy playground and the trails from her ranch to the mine and from her ranch to school were worlds of Indian artifacts, coyote trails, fool's gold, yucca stalks and other daily intimacies with Nature.

"It was a frugal life, but a very healthy and satisfying one—we learned many things," recalls Mrs. Jackson who is starting a new adventure in mid-life that may again prove frugal, healthy and satisfying.

The death of her father forced her family to move to Los Angeles when Mrs. Jackson was eight. She finished her schooling in that city and went on to work for the Los Angeles County Library. Marriage to Wendell Jackson of Oakland meant a move to the Bay Area. Thus having lived the greater part of her life in the West's two great metropolitan areas, Mrs. Jackson is willing and anxious to return to the back country.

\* \* \*

For the past 20 years Beula M. Wadsworth, author of this month's "Southwestern Man Against Mammoth," has lived on the desert in the Tucson, Arizona, area. She is a retired mid-western public school and college teacher of art who has made the history of Arizona and the culture of the state's various Indian tribes a long-time hobby. She taught art at Michigan State College and Pratt Institute and holds a degree from the University of Arizona.

Miss Wadsworth has written over a hundred feature articles and how-to-do-it stories for various magazines related chiefly to arts and crafts. She accompanies her study hobby with painting Arizona scenes and writing poetry. At present she is experimenting in modern creative oil painting. Miss Wadsworth also considers her magazine work as a hobby.

She is a member of the National League of American Pen Women.

too along the south side of the road that were covered with glyphs. The picture rock area covered a couple of acres up a steep wash.

The Panamint Indians who live at Furnace Creek insist that they cannot read the strange glyphs. They say the writings belong to the "old people." And indeed the carvings bear a strong resemblance to those stone writings I've found in the Panamints, the Argus and the Coso Ranges. All are considered very old by the archeologists. No one can read the carvings although certain of them bear a similarity to modern pictographs. It is likely that the riddle of the Greenwater petroglyphs will never be unraveled.

There are Indian caves in the area, too — hard-to-reach shelter caves carved by the wind and weather out of the softer rock. There are traces of smoked ceilings here, indicating ancient habitation.

There were several places in the higher reaches of the canyon where I found pieces of jasper, and another ridge nearby offered some fine but small green matrix geodes.

The sun was making long shadows across the canyon and we agreed that Greenwater Wash was no place to spend the night. The road back to Death Valley passes the ghost camps of Greenwater and Furnace and as the sky melted into the soft rose and purple of a Valley sunset we bounced back onto the paved highway within

the Monument boundary south of New Ryan.

We stopped briefly to chat with friendly Al Padgett, solitary caretaker of the Pacific Coast Borax holdings at New Ryan, and enjoyed the antics of Padgett's pet ravens before we headed back to Furnace Creek.

It had been a good day's trek. We had a bag of fine cutting-quality jasper and jasp-agate, a pair of rare purple bottles carefully wrapped in sweaters and photographic evidence of the ancient people that had once lived in this fantastic land of sun and sky and color.

Greenwater Canyon Road—delightful and exciting as it is—should not be considered an easy Sunday afternoon drive. It is a road for an adequately-powered car and an experienced desert driver. With due emphasis on safety it should not be tackled by a single car. Two or more cars in caravan always insure safer transit. Jeeps and pickup trucks will have no trouble here. Greenwater Canyon is at its best in spring or fall and considerable thought should be given to a midsummer excursion into this area.

We'll be going back to Greenwater Canyon one of these days. There are more purple bottles to be found, more of that brilliant red jasper to pick up and I would like to follow my lead along that green geode ridge.

After one visit Greenwater Canyon became one of my favorite desert exploration areas.

## ON DESERT TRAILS WITH A NATURALIST - XIX



*Cirio's seed vessels sprout at top of wand-like plant.*

**F**ORTY YEARS ago while seated in a college classroom I heard my botany instructor skillfully describe a wild and marvelous land which possessed so many strange and singular plants that its flora was considered to be among the most unique in the world. Although near at hand, it was because of its poor roads or no roads at all that it was figuratively far away and largely unexplored.

This fascinating region was the Viscaïno Desert of the mid-peninsula of Lower California. As I became aware of its numerous challenges to the exploring naturalist, my youthful mind was intrigued and I decided very soon to search those unspoiled wilderness areas. But as so often happens, the fulfillment of a desire is long postponed and it was not until five years ago that I made my journey into that mystic land to see its many botanical marvels.

Of all the strange plant wonders that came to view, the most impressive was that peculiar cousin of the ocotillo, the cirio, as the Mexicans call it, but known to the botanists as *Idria columnaris*. Briefly and roughly described it is a thorny spar 30 to 50 feet high reminding one of a slender giant carrot or parsnip root turned upside down.

I found great forests of these fantastic spiny pole-like trees covering

# Gray Ghosts of the Viscaïno Desert

The ocotillo's cousin, the cirio, is a fantastic plant in a desert known for its peculiar flora. These spiny poles often climb 50 feet into the Baja California sky—grotesque lords of the hundreds of square miles that make up the Viscaïno Desert. When these monarchs die they go on to a "sweet" reward—wild desert bees often build hives in their hollow shells.

By EDMUND C. JAEGER, D.Sc.  
Curator of Plants  
Riverside Municipal Museum

hundreds of square miles of the interior Viscaïno plains, hills, and mesas. Like gray ghosts, they studded the rocky hillsides which took on the appearance of a quickly burned-over forestland with only dead trees remaining. Crios are impressive at any time but especially so when seen in the uncertain light of a brilliant moon. At their bases is often found an almost impenetrable thicket of cacti and other thorny shrubs and occasional individuals of a tree-like yucca (*Yucca valida*) and the massive cardon, one of the largest of all the giant tree cacti of our deserts.

The tapering pole-like trunk of the cirio may rise from a swollen base to a height of 15 to 40, or even 50 feet. From it project in spirals and in reg-



*Cirio branchlet showing primary, thorn-forming leaves.*

ular intervals short, very thorny, pencil-sized, nearly leafless horizontal branchlets from eight inches to two or even three feet long. At the very top sprout forth in early summer slender stalks bearing numerous yellow tubular flowers in form much like those of ocotillo which produces such showy bright red flowers at the ends of its long wand-like stems. Once in a while the peculiar columnar trunks of the cirio branch near their tops giving the tree a peculiar pronged or forked appearance. Others are found that are grotesquely crooked, bent into giant loops or otherwise malformed because of early injury.

The cirio trunk consists of a lightweight, tubular, woven, woody framework or skeleton covered with a thin, pale yellow-gray bark. Within is a bitter, potato-like pulp capable of storing large amounts of water. In times of extreme drouth the cattlemen sometimes cut down these succulent trees, split them in half or strip off the bark with axes and thus expose the edible pulp for their hungry cattle.

We found, when examining the woody framework of the trunk of dead, barkless specimens, that it was penetrated by numerous spirally arranged fenestras or openings, each large





*Forest of cirios in the Viscaïno Desert of Baja California. Photograph by Homer Aschmann.*

enough to admit a finger. One of the lads who was with me and who was adept with an axe, cut down a dead sun-bleached hollow spar into some of whose windows he had seen a few bees entering and emerging. To his surprise he found within a considerable amount of comb filled with golden-yellow honey. We were told by some Mexican cowboys who came into our camp that afternoon that old cirio trunks are often used as hives by wild bees and that occasionally they find as much as 20 pounds of delicious honey in one of them.

The thorns of the horizontal branchlets of the cirio have a peculiar origin. The stems or petioles of the short-lived primary leaves become the stout thorns and it is in the axils of these thorns that the bundles of fascicles of large secondary leaves grow. Like the secondary leaves of the ocotillo, the leaves of the cirio drop off as the soil dries but new ones quickly come on after good rains.



*Darkened areas show cirio forests in Baja California and adjacent Sonora.*

On the Viscaïno plains facing the Pacific Ocean, strong fog-bearing sea winds sweep inward and encourage the growth of a gray-green pendulous lichen on almost every branch and twig. The lacy strands are in almost constant swaying motion. I understand that for a time this lichen was harvested and shipped to Europe because of its yield of a dye which was used in the coloring of fabrics. The invention of synthetic dyes destroyed this once flourishing industry.

The nearest cirio forests, accessible by road, are found 20 miles east of Rosario, a pueblo near the sea about 150 miles south of Ensenada. The camino beyond the pavement is passable to good drivers with sturdy cars. There are stretches of deep dust, high centers and steep grades but those who are willing to face these hazards of the road are rewarded with sights of trees which rank among the most striking and bizarre of all woody plants of North America.

## LIFE ON THE DESERT

# *We Are Seeking a New Home in the Back Country*

Raymonde Jackson and her husband watched their friendly little community expand into a seething center of population. The change brought unhappiness to the Jacksons and they decided to do something about it. A chance discovery of a radioactive "hot spot" in the High Sierras while on a week-end prospecting trip turned their attention to the uranium boom in the Utah-Colorado area. One visit to the plateau convinced them that somehow they would move there and make a new life for themselves and their children among the hard working and happy dwellers of that rugged land.

By RAYMONDE JACKSON

**W**E LIVE IN A California community called Walnut Creek, in the San Francisco bay area. When we moved out here it was a small town and we loved it. During the last few years it has become such a seething center of population that we decided to make a change in our place and mode of living. We have a lovely big seven room home with every modern convenience.

Recently while on a week-end trip with friends we accidentally discovered a radioactive area in the High Sierras. We filed four uranium claims with all the excitement and expectancy that such a discovery creates. The AEC told us that it was not of a commercial grade and advised us to continue our search of the area.

This discovery, added to the many accounts in newspapers and magazines of the uranium boom, touched off our desire for a life in the open—a desire for the romance of what might be in the good earth.

After carefully thinking out what such a move could do to our lives and to the lives of our three children, Ray, 11, Douglas, 9, and our little girl Claire, 7, we put our house up for sale and took a trip to the Utah-Colorado plateau where fabulous things were happening.

We took Highways 50 and 6 and entered the area the day after a big blizzard had swept the western slopes of the Rockies. We underwent all the woes of the inexperienced traveler—ran out of gas on the desert—got stuck on the icy pavement. A very friendly young minister and his wife were kind enough to help us out of the ice by giving us a can of coal slag to place under our wheels for traction. We found the motels along the way of the best type and the food was wonderful and much less expensive than on the coast.

The first thing we did when we reached Grand Junction, Colorado, was to call on the AEC to see if we had even a remote chance of finding the radioactive ore that can bring riches and fortune in just one stroke of good luck. The AEC is a most interesting place. You park your car in a designated area for visitors and enter the grounds through a guarded gate and walk to a small reception office manned by armed guards.

There you state your business—in our case we were inquiring as to the advisability of becoming prospectors. After a short wait we were taken to the office of a Mr. Taylor who is there for the purpose of answering questions and giving advice to those who seek it. He is a very dignified and well informed man. We, of course, were asking for advice as to what to do with our lives which is a very difficult question for anyone to have put to them. Mr. Taylor encouraged us to talk for a while, asking a question here, or making a comment there.

Presently he said, "I can see you would like to prospect and to make this change with your family, and that you probably will, regardless of what I say. The best thing I can tell you to do is to go to the uranium country and see for yourselves. It is big, it can be cruel, but it also can be very rewarding. You must go equipped and with a certain amount of knowledge. Go to the spots that are born of this boom and see for yourselves if you think you can find a way for your family."

Those were wonderful words of advice. We were given a few samples of uranium ore by Mr. Taylor, and he spoke of closed areas, claim filing and the hazards of the desert. He mentioned the type of equipment that was a must and also told my husband that he should have all the knowledge of minerals that he could acquire. My husband since has been a regular student at the mineralogy classes at San Jose. He has learned to run field tests and to recognize the important minerals.

Mr. Taylor suggested a road that would take us through the recently created towns of Uravan and Naturita and then over the mountains to Montebello and Moab. We took the road and drove for 90 miles through a most rugged terrain at speeds of 10 to 15 miles an hour. The rough road, left even in poorer condition by the recent storm, was owned by a uranium ore trucking company. We were just about to feel that we were on a wild goose chase when we arrived at the mill town of Uravan. There were several newly constructed homes and many trailer homes and shacks, and a shopping center that consisted of a large market and general dry goods store in Uravan. I shopped in the market and found prices were the same or slightly less than on the coast. The town's drug store served soft drinks

Raymonde Jackson has promised that in a year's time she will write a report on the experiences she and her family have had in establishing themselves in the uranium country. Mrs. Jackson is anxious to let others who might not be able to afford an exploratory trip to the plateau but who share with her the desire to move out of congested cities, know exactly what the Colorado-Utah area has to offer people who are searching for a new and richer life.

and sandwiches and was the only place in Uravan that food was served besides the company-run boarding house. There were no accommodations for travelers—you came to Uravan to stay and to establish your own domain. Everyone was very friendly and more than willing and ready to share what they had. We admired this spirit of friendliness and kindness that met us everywhere we went.

It was especially noticeable after living in a crowded area where the pace is so fast and competitive people do not have time for each other. We had the car serviced and inquired about the road ahead and learned that the road to Naturita was excellent, but the road Mr. Taylor suggested over the mountain was closed. No one had tried to use it since the storm. We had several interesting conversations with people who lived in Uravan—people like the men who drive the ore trucks, the men who have little side businesses, the shopkeepers and the men who were just standing around on the corners. We talked to everyone who would talk. Listening to these people we got a general idea of what their lives were—hard work, struggle, dreams and contentment—and they all seemed happy and secure. They did not have the frustration that comes from fruitless search and disappointment. Hard labor and privation were part of their lives and yet they all seemed to have great hope for the future. Maybe this is the life of the dreamer, who knows? Who is the one to say it is right or wrong?

We were taken in by the most wonderful family I have ever met, becoming fast friends immediately. Their seven little girls showed us their embroidery work, rock collections and their little school costumes. We saw into the hearts and lives of these people and we liked what we saw. It was good, loving and wholesome. We found this everywhere we went in this back country. It has given us confidence and courage to try for a new life of our own. We are eager to try this new life that could give so much, and we are sure we will find security and peace in the beauty of the uranium country and its people.

We completed our tour and liked what we saw. Then we came home, sold our house and now my husband is finishing up his business obligations. A recent purchase of a two bedroom trailer is going to make our family really live the uranium tour. The children are excited and eager for our new adventure. They will go to school wherever we are and the experience of meeting new people, of living new ways, and the subsequent necessity for

adjustment to their new life will be a valuable experience for them. It will be a very interesting move.

We are going with the thought that we will like the country, the people, and the new life. Some of our friends think we are out of our minds while

others envy us. But I know I will love it, and usually when mother is happy it spreads to the rest of the family. Our happiness and contentment are the "big strike" we expect to make, but we also expect to have a lot of fun looking for uranium.

#### LAND BUREAU WARNS AGAINST "TOP FILING" SMALL TRACTS

Those interested in obtaining up to five acres of public land for business, recreation or homesite purposes under the Bureau of Land Management's small tract program should avoid the pitfall of "top filing," advised E. R. Greenslet, BLM state supervisor for Nevada.

"There is no advantage to be gained in filing an application for land already covered by a previous filing," he said. Persons interested in small tracts were urged to examine land office records personally to determine whether the tract desired is embraced in an existing application. Applicants were warned that failure to check as to whether their application is a top filing will cost them their \$10 application fee. Such fees are not refundable.

Because small tract land is less desirable than the public has been led

to believe, the BLM recently tightened its regulations for obtaining land under the Small Tract Act. Personal inspection of the land is now required for validation of applications.

"The remaining lands are of relatively poor quality without ready source of water. Most are isolated, mountainous, not readily accessible and are not served by public utilities.

"In short," said Greenslet, "to be a successful applicant within the intent of the Small Tract Act, a person has got to want some land pretty badly and be willing to work hard for it and on it."

Despite this somewhat discouraging outlook and the fact that small tracts are not obtainable free of charge, many bonafide applicants are genuinely interested in developing small tracts of land that they can call their own, and are taking advantage of the benefits of the small tract program, the BLM official said. *Nevada State Journal*

## Picture-of-the-month Contest . . .

The Desert Southwest is the camera artist's paradise. Flowers, animals, shrubs, trees, mountains and sky all cooperate to make photographs distinctively interesting and meaningful — and these camera studies are all fit subjects for Desert Magazine's Picture-of-the-month contest. Photographs must be essentially of the desert and cash prizes are given to winning entries.

Entries for the October contest must be sent to the Desert Magazine office, Palm Desert, California, and postmarked not later than October 18. Winning prints will appear in the December issue. Pictures which arrive too late for one contest are held over for the next month. First prize is \$10; second prize \$5. For non-winning pictures accepted for publication \$3 each will be paid.

#### HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the Desert Magazine office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. Desert Magazine requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from Desert's editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

*The Desert Magazine*

PALM DESERT, CALIFORNIA



# Tucson Desert Nature Trails

Thanks to the interest of two well known naturalists, there has been created on the Arizona desert near Tucson a sanctuary where birds and human beings are beginning to get acquainted with each other.

By LEWIS W. WALKER  
Photographs by the author

**F**OR MANY YEARS I have been accustomed to finding rare and unexpected things in my journeys across the deserts of the Southwest—a harsh land where the most beautiful blossoms in the world are found on plants so well armored with tiny daggers that the admonition “look, but don’t touch” is a needless command.

My acquaintances in the desert wilderness include the tiny sparrow-sized elf owl, smallest member of its clan in the entire world, which relies on the refrigeration qualities of the giant saguaro cactus to insure its comfort during the hot summer days; the fragile gecko lizard with its almost human skin; the dainty kit fox with its big ears, and feet so tiny that it can walk



*Visitors come to the Desert Museum from all over the country—and many of them get their first lesson in Nature study here.*

on cholla-strewn ground with impunity, and the sweet-scented blossom of the night blooming cereus.

But not all the rare and unusual things on the desert were created by Nature. Man also has contributed to the interest and fascination of this vast arid region. One of his most important works is the Arizona-Sonora Desert Museum situated 12 miles west of Tucson, Arizona. The story of this museum and its surrounding gardens goes back to the chance meeting of two of Arizona’s outstanding naturalists, William H. Carr and Arthur Newton Pack.

At the time of their encounter Pack was operating the Ghost Ranch Lodge and overseeing the work of the American Nature Association, originally created by the Pack Foundation. Carr had just finished his third book on natural history entitled *Desert Parade*. Independently these two men had come to the conclusion that the area’s educational chain lacked a few important links, links that could be supplied by an institution such as they were later to develop.

When Carr, developer and director of New York’s famous Bear Mountain Trailside Museum, and Pack, philanthropist, former editor of *Nature Magazine* and author of several books on forestry, finally met and discussed the desert and education they learned they had many ideas in common.

Pack supplied the initial \$1500 to survey the possibilities of creating a

museum. Carr, whose job it would be to direct the museum once it was launched, set forth a five point program that would serve as a guide for the institution:

1. To enable visitors to gain knowledge in several hours, that otherwise would require years of wilderness searching.
2. To foster appreciation and knowledge of living natural objects, both plant and animal.
3. To awaken public interest in resource conservation through stressing the vital relationships between soil, water, plants, and wildlife and people.
4. To stimulate and aid scientific research in natural history and resource conservation.
5. To cooperate with all universities, colleges, public, private and parochial schools as an outdoor educational center.

When this program was presented to the Board of Supervisors and the Park and Recreation Committee of Pima County the buildings and surrounding ground of an old C.C.C. camp now owned by the county were assigned to the Arizona Sonora Desert Museum. Eight months later, in September of 1952, the doors and gardens were opened to the public, with all expenses being borne by the American Nature Association, and by bequests from public spirited citizens and by a



*Night callers. Museum water hole attracts many desert denizens. Photo was taken by author from blind provided by museum for nature watchers.*

membership list which shows that the public is interested in the venture.

A few seasons ago most people would have considered this barren territory not worth a visit despite its profusion of native plants, native birds and desert lizards. Now, however, over 250,000 visitors have been clocked through the gate, drawn to the spot and entranced by the same birds, the same plants and same scurrying reptiles which have always called the area home. Each plant, however, now has its individual label calling atten-

tion to some definite characteristic, Indian use, or other pertinent fact. In short, they are no longer spiney non-entities loosely grouped together as cacti but have become individuals in the scheme of nature for a fast growing horde of visitors, avid for knowledge.

When I first looked upon the scene from the spacious tiled porch of the Museum I noticed a few birds flitting about the labeled plants and if I gave them a thought at all, probably classed them as passing visitors which would

soon fly over the fence to areas where they would have more privacy. Then a cactus wren flew by me at shoulder height and commenced to feed its young in a nest within easy reach of the trail. A white string stretched from the nest site to a sign along the trail which was changed from day to day as the birds built their nest and raised their brood.

Further along the trail a printed sign informed me that the nest I saw in the spines of a cholla was not constructed for use as a nursery, but instead was used solely for a night roost. The bird parent who was not keeping the eggs warm or, later, watching the babies, used it as we would a spare bedroom.

Hidden behind shrubbery are two small waterholes which attract a constant stream of white winged doves to the area. Some of these birds come to the museum only to drink while others who have learned that this water supply is a permanent and convenient one have moved their nesting areas within the museum's fenced enclosure. The result has been that the concentration of doves is astounding. From one vantage point I was able to see three pairs either incubating eggs or shading young from the midday sun.

A penetrating whistle from the base of a group of jojoba bushes drew my attention to a desert thrasher prowling the dead leaves. The thrasher is a very shy bird and usually shuns humans but this fellow had apparently grown used to people. He caught a juicy grub and flew a few feet from me on his way to his nest in a low cholla cactus.

I have photographed a great many desert birds and always found them to be extremely secretive and full of deceptive ruses to keep their homesites from being located. At the museum, however, I noticed a complete reversal of form. This place is truly a nature photographer's paradise.

Four lanes of diagonal parking stretch straight out from the museum entrance for 150 yards and the chrome glint reflects across the desert from cars representing every state in the union.

The museum is open to the public every day of the year from 10 a.m. to 5 p.m. There is no admission charge.

The people passing through the admission-free gates seem to realize that they are being let in on some secrets which they have long wanted to learn, not through a compulsory school room method but voluntarily along the trail-side at the most unique educational display to be found on the desert.



*Upper—White winged dove builds her nest at joints of giant saguaro cactus. In this thorny abode young birds will be fairly safe from land based predators.*

*Lower—Palmer thrasher is about to feed the grub in her beak to open-mouthed offspring. Nest is near ground but surrounded by protective cactus spines.*



# LETTERS

## Those Mineral Rights . . .

South San Gabriel, California  
Desert:

As you know I am a homesteader in Morongo Valley, California. I think the government is not shooting square with us when it retains the mineral rights to our land.

We have improved our land and bought it, paying more for it than my father sold better land for when he came to California. Also by hard manual labor I built my house, two of them, and dug my own cistern for water, but now at any time the government could decide to open the land up to mining, and outsiders could come in and wreck all that I have done. On the other hand, should I find a gem or a gold nugget on my land, that gold would not belong to me. I would have the option of tossing it back into the ground, giving it to the government, or bootlegging it.

The American way was developed through individual initiative through the homestead laws whereby a person was allowed what he could develop and use, but one cannot adequately use that land if others may come in and exploit and despoil it. Down that road lies Nazism and Fascism. On the other hand if the government retains it, and takes the minerals out from under it, that is Communism in its worst form.

The government should surrender to us the mineral rights to the land which we own. Any other course is not truly the American way.

MELISSA B. STEDMAN  
Jackrabbit Homesteader

To M.B.S.: Please do not be too tough on Uncle Sam, for the picture is not quite as dark as you have imagined. It is true the Federal Government reserves all mineral rights on lands leased or sold under the Small Tract Act. However, while you have no mineral rights to these lands, neither can anyone else come in and claim such rights. They simply are being held in reserve for the time when there may be an emergency—and if or when that time comes, the interest of all the people of the United States will take precedence over the rights of any one individual. Isn't that the way it should be in a truly democratic country?

Actually, the entire question is rather academic, for lands with any showing of minerals are not being

classified for lease or sale to Jackrabbit Homesteaders. On land that has no minerals, the possession of mineral rights is a rather meaningless bit of bookkeeping.—R.H.

## Desert Dump for Los Angeles . . .

Van Nuys, California  
Desert:

I recently read an article in the *Los Angeles Examiner* which told of the Los Angeles County Board of Supervisor's ordering of a study into the feasibility of dumping city rubbish in "outlying desert and sparsely inhabited areas." This made me very mad and the thought came to me that if *Desert Magazine* would give the dastardly idea some publicity perhaps the Los Angeles County Supervisors would find out just how the desert dwellers feel about turning their home into a dump for the big city.

GEORGE HALLETT

Friend George: You may be sure *Desert Magazine* will not accept gracefully the idea of making the desert a dumping ground for Los Angeles. We'll always have a friendly welcome for the folks who reside in the city—but not for their garbage. We doubt if the Angelenos themselves would favor the idea of making a rubbish dump of their favorite winter playground.—R.H.

## Hopi Names . . .

Victoria, Texas  
Desert:

Question 2 in the August Desert Quiz referred to the annual snake dance of the Hopi Indians and in it you use the word "clan" to describe the Snake and Antelope Societies. You will find that these groups are made up of members of many different clans.

REV. VICTOR R. STONER

Rev. S.: *Desert Magazine* must take a 60 percent grade on that question. According to our authority, "Handbook of American Indians" by the Bureau of American Ethnology, Smithsonian Institution, the East Mesa Hopi are divided into 12 phratries which are made up of several dependent clans. Among the phratries are the Chua (Snake) and Kachina (Sacred dancer) which should properly have been referred to in the question as people, society or fraternity. But the Corn, Squash and Antelope, also mentioned in the question, are listed as clans. The Corn (Kau) Clan being a member of the Patki (Water-house or cloud) phratry; the Squash (Patung) Clan in the Snake phratry; and the Antelope (Chubio) in the Ala-Lengya (horn-flute) phratry.—R.H.

## Civilian Gadget Testing Range . . .

Winterhaven, California  
Desert:

Lately I have heard a lot of talk and have read a lot of print about the large acreage of the public domain that is being taken-over by the various departments of the military. To my knowledge practically all of this taken-over public land is posted against trespass.

A great many of my acquaintances here in the Southwest have suggested that we as citizens make an effort before it is too late to acquire for ourselves a reservation whereon we can test our own personal equipment for peaceful purposes such as wiener roasters, picture making gadgets, geologist picks, geiger counters, etc.

None of us, however, are familiar with the legal machinery used to acquire exclusive rights to large areas of public land. A lot of the interested folks are readers of *Desert*, so if some reader can supply the desired information it will be greatly appreciated.

ED ROCHESTER

## Recreation Threatened . . .

Umpqua National Forest, Oregon  
Desert:

I certainly agree with Robert M. Reid and his stand against vandalism (*Desert*, May '55). We are enjoying a trailer house trip through the National Parks and Forests, but vandalism makes us wonder just how long we will be able to delight in this fine privilege.

The Park Attendant told us today how people were carrying off garbage cans, the grates from the outdoor barbecue pits, water faucets and even toilet seats. The wooden tables are being broken and used for firewood.

This is not children's play by any means. I suggest that all conscientious lovers of the outdoors record the license numbers of vandals and then report them to the proper authorities.

EDWARD V. SMITH

## Nuggets at Dos Palmas . . .

Crestline, California  
Desert:

I can confirm some of the details of Harold Weight's story, "Dark Gold on the Tabaseca Trail," in the July issue of *Desert Magazine*.

I was contracting desert assessment work near Dos Palmas in 1909 and knew the party called Slim. I received several of the nuggets mentioned in the story in payment for work I did on a stationary engine at a mine a few miles to the north. I had no difficulty in exchanging the nuggets for supplies I bought in the general store at Mecca, California.

JOHN J. ADAMS

DESERT MAGAZINE

## The Ocotillo

By BETTY DAVIS  
Santa Fe, New Mexico

I saw an ocotillo  
Growing from a ledge of rock.  
It was a rather ugly plant,  
And so it was a shock  
To note there grew from every branch  
A plume of flaming red—  
A beautiful and vibrant thing,  
So bright it turned my head.

I thought of how a woman acts  
When springtime rolls around,  
And she must have the loveliest  
Easter bonnet to be found.  
She's the same old girl beneath it,  
But she walks with lighter tread,  
Convinced she's a "new woman"  
With that bonnet on her head.

So, carefree ocotillo,  
Flaunt your plumes and look so proud—  
For sheer, undaunted arrogance,  
You've all the law's allowed!  
Your confidence is justified,  
You're dressed in fine array:  
Your stems grotesque each wear a bonnet  
Beautiful and gay.

### HEEDLESS STRANGER

By WILLIAM UTTERBACK  
Santa Monica, California

It's just a winding little desert road  
That wanders on through cactus and  
through sand  
And most of us who use the little road  
Are dwellers here within this desert land.

We keep a wary eye for little friends  
With coats of fur, of feathers, or of scales  
This is their home and as our roadway wends  
It intersects their busy little trails.

But when we see a creature, torn with grief  
Beside a lifeless mate, what can we say?  
How can we make amends or bring relief  
Because a heedless stranger drove this  
way?

### GLORY

By WILLIAM CARUTHERS  
Ontario, California

Across my path a spider threw  
A barrier of lace.  
A fog blew in and then  
A silvered etching hung in place.

Designed for death—designed for life  
It swung from tree to tree.  
There came the sun and thus was made  
A diamond wreath for me.

And day by day I know I spin  
Some web across the way  
Each act a thread in its design,  
A new one every day.

What glory, if one passing by  
My patterned web should see,  
And find in it, the simple thrill  
The spider gave to me.

### THE CHOSEN ONE

By ADELAIDE COKER  
Ojai, California

I stood alone upon a hill  
And watched a rainbow gayly spill  
Its curving colors, mixed with gold,  
Upon a cactus grizzled, old  
Until each thorn became a spire  
Of serpentine rainbow fire.



Photograph by Norton Allen

## Ideal Life

By TANYA SOUTH

Who gives with patience all serene,  
With love and truth at core,  
Will find a source of strength unseen  
For forging on once more.

No burdens then too heavy are.  
No duties are too stale.  
Life is a shining, fiery star  
Toward His ideal.

### WIND LEGENDS

By GRACE BARKER WILSON  
Kirtland, New Mexico

The west wind knows the stories  
Of forgotten years  
And peoples on the desert,  
Their loves and their fears.

The wind, being no miser,  
Writes the stories down  
In barren, sandy places,  
Remote from lodge or town.

His messages are transient,  
And with his gritty hand  
He changes each day's legend  
Written in the sand.

## HOME ON THE DESERT

# Planning a Winter Garden . . .

October is the month to plan and plant the flowers that will bloom in the spring. This month Ruth Reynolds lists many of the species which thrive in desert soil and climate—and tells of her own experience with them.

By RUTH REYNOLDS

**W**HEN THE desert's tranquil October days entice me into the garden it will be time to re-create a spring fantasy I dreamed up one day last April. I didn't dream it up entirely for part of it I saw in reality at a flower show where there were hundreds of flowers. I came away mentally trying them all out in my own garden—with colossal results!

As the time draws near to plant spring-blooming flowers I am still dreaming, but on a more realistic scale—reduced to the limited space of one home garden.

It is good to know that so many spring flowers will grow in a desert garden as well or better than nearly any other place in the country. Not for nothing does this old desert sun shine above us—but with moderation in winter, thank goodness, so that it does not restrict our choice of things to plant now as it does in spring and summer.

Perhaps this makes choosing more difficult—and more fun. My spring dream garden contains only those few flowers that are most irresistible to me because they are so lovely and so easy to grow.

These are, among the annuals, calendulas, poppies and petunias. Sweet peas, that do marvelously here (and now's the time to plant them) are omitted only because I have no wall space for them, and they do need wind protection.

Among flowers that grow from bulbs or rootstocks I would choose ranunculus, iris and some of the daffodil-narcissus family.

This may appear to be a limited selection, but each of these two groups

contain flowers that come in so many varieties that the choice must again be greatly narrowed.

Of those selected the iris is undoubtedly the most diversified. It comes in almost every color and combination of colors, varies greatly in size and shape, and has come the farthest. How long ago and far away are those "blue flags" that used to spread over the backyard of my eastern home for me to dig up?

After that early experience I was a bit slow to discover this modern *Fleur-de-lis* (flower of lily) in all its new beauty. Surely no other flower has been so responsive in the hands of the hybridists.

Botanically, iris are classified as rhizomatous—those that grow from rhizomes; and bulbous, those that grow from bulbs. The former include the native American beardless and the more prevalent bearded iris—those with short fuzzy hairs at the base of the "falls," the two drooping petals that fall away from the "standards," the upright petals. Among the bearded iris are the tall, medium and dwarf. Closely related to them are the onocyclus, with short, unbranched foliage and large, short-stemmed flowers; and the regelias, with strikingly veined flowers.

The bulbous types include the Dutch, English, Junos and Reticulatas. The latter, daintiest of all the iris family, are fragrant. Their purple-violet petals are veined and their falls are edged with gold.

In selecting iris the price of rhizomes is something I have to consider. The newly developed ones will often cost \$25 or more, but others, almost as recently developed, may sell for less than a dollar—making many fine specimens available to the average gardener.

Almost any place that has more sun than shade is a good place to plant iris—in the cutting garden, in borders, in drifts. I'm partial to one-color drifts and to shades of rose and pink and orange.

Mine have to go in the garden. There, planted 18 inches apart, back-

to-back in double-row arrangements, with the "toes" or growing ends of the rhizomes pointing outward, they will have room to spread away from each other and thus postpone digging-up time possibly until the fourth or fifth year.

They do not require an overly enriched soil. A scant shovel of manure in the bottom of each ample-sized hole at planting time should suffice. This should be well covered with garden soil upon which the rhizome is planted with roots carefully spread and barely covered with soil one-fourth inch deep.

After each blooming season they should be given a light feeding of all-purpose plant food. They require good drainage and little water, but not too little in our dry climate. Heaviest watering is recommended during the month before they bloom. Dead leaves should be cut back in autumn or at planting time. At all other times foliage should be kept in a healthy condition to nourish the rhizomes or bulbs as they store food for future blooms.

Among the narcissus-daffodil family the bunch-flowered narcissus blooms best for me. My favorites are the paper-white narcissus, with all-white flowers, and the St. Agnes, with flat white petals around an orange-red cup.

The trumpet varieties, of which the King Alfred daffodil is the most familiar, are also grown successfully in this area, but there are other similar, earlier blooming daffodils that usually do better than the King Alfred.

Bulbs of the various types should be planted to a depth of slightly more than twice their size in well spaded soil that need not be more than ordinarily fertile. Some of them if planted a foot apart may not need to be taken up and replanted for three or four years. Others may increase faster and require replanting sooner.

Even if I have to yank out something else in this dream garden, I must include ranunculuses.

Until I came to the desert I had never seen them, and I have still to see anything surpass the beauty of their large, camellia-like flowers of white and cream, pink and rose and brilliant reds and orange.



They grow from little claw-like tubers, planted point down in loamy soil. For us that usually means a made-to-order soil, conditioned with organic matter and fertilizers. Large tubers, a little more costly, produce larger flowers and more of them, so it usually pays to buy the select tubers. It is often best to get new ones each year, although those produced by the plants may be dug up and replanted the second year.

In considering annuals I find that much that can be said of iris can also be said of petunias. They have been doubled, fringed, ruffled and glamorized with the most gorgeous colors imaginable. For the garden the singles may still be the most practicable and rewarding, for the new highly bred types need more care and shelter. But in planters or window boxes these hybrids can put on a breath-taking flower show of their own. The seeds, which are small and expensive, should be sown in flats and sprouted under glass. Later in the season transplants may be obtained from nurseries.

Of all annuals, the calendula is probably the easiest to grow. From a few seeds planted in autumn a golden harvest of bloom can be counted on from late winter through early summer. Their hues of gold range from cream, lemon and apricot to orange. They will grow under almost any condition but with enough water and fertilizer they will outdo themselves.

Poppies are also very easy to grow and respond magnanimously to food and water. I have used a little ammonium phosphate around Shirley poppies with good results. Once they re-seeded themselves and took over the entire end of the garden where they bloomed riotously from March through May. They are both double and single petaled and are many colors—white, pink, salmon, rose, red, and bi-colored. Iceland poppies are very similar and also come in yellow and orange.

As space runs out I begin to feel guilty about slighting many old friends who have every right to a place in my garden. "What of the larkspur?" I ask myself, "and the snapdragon? the stock?" None is difficult or temperamental and all have grown beautifully for me in years past. And there's the African daisy—why overlook a flower that actually prefers a desert garden to grow in?

Yes, these I think must be included. And there's African blue daisy, there's baby's breath . . . strawflowers . . . scarlet flax . . . But the list grows long, even for an imaginary garden.

## River Pilot Georgia White Brings Record Party Through Grand Canyon

Georgia White, only woman river pilot on the Colorado River, recently brought the largest group of people ever to come through the Grand Canyon into Lake Mead. Miss White had one complaint: the trip proceeded "too smoothly."

The 30 people who made the trip used seven boats, three of them 22 to 27 foot pontoons and the remaining four 10-man neoprene rubber boats. The party left Lee's Ferry on July 5 with the trip taking 20 days to complete. The group was equally divided as to men and women, their ages ranging from 8 to 75. The eight-year-old, Bonnie Bundy of Mt. Trumbell, is believed to be the youngest person ever to make the trip.

Miss White reported that the tour went so well that she became worried someone would get careless and relax vigilance against the ever present hazards of the river. Although the Colorado was near a record low point, the entire trip was made without portaging. Most serious incident occurred when two people were bounced off a boat, but they were quickly hauled in.

The record-breaking party pointed up the fact that river running on the Colorado is becoming increasingly popular. From 1869, when Major Powell made the first trip, until 1949, only 100 persons had completed the jaunt. From 1949 to 1954, however, the second 100 persons completed Grand Canyon river trips. In 1955 alone there will be close to 100 outdoors men and women braving the waves and enjoying the deeply engorged camps.

The increased popularity is believed caused by many factors: the outstanding safety record of Norm Nevills and his successors, Frank Wright and Jim Riggs, on their passenger trips since 1938; the introduction of motor boats in the Grand Canyon by Ed Hudson and "Dock" Marston in 1949; Jimmy Jordan and Ned Sanderson's efforts in 1951 which proved the superiority of outboard motors as power in running fast water;

The availability as war surplus of almost indestructible rubber rafts since 1945 has added much to the security of boating in the rapids of the Colorado and other streams. These neoprene rafts rebound from the rocks with which they collide without damage to the boats or harm to the passengers. However, river pilots continue to equip



Georgia White

their passengers with life belts when running treacherous water.

Harry Aleson was one of the first to pioneer the use of rubber rafts in the western rivers, but they are being used quite generally by boatmen today. —Nevada State Journal.

### WORLD'S TOP SCIENTISTS TO ATTEND SOLAR SYMPOSIUM

The World Symposium on applied solar energy to be held in Phoenix November 1 to 5 and the conference on solar energy in Tucson, October 31 and November 1 will feature some of the world's most outstanding scientists on its program. Sponsored by the Association for Applied Solar Energy, the Stanford Research Institute and the University of Arizona, the two Arizona meetings are being held to provide a common meeting ground for research workers throughout the world and those of industry, business and government who are interested in hastening solar-energy utilization.

The Tucson sessions, after a general introductory meeting, will be divided into three sections under individual chairmen to discuss the main types of processes upon which the use of solar energy may be based: thermal, photochemical and electrical. Papers will be presented in the multiple sessions followed by open discussion of ideas.

A solar engineering exhibit, displaying machines and equipment, will be held in conjunction with the symposium at Phoenix.

# Here and There on the Desert...

## ARIZONA

### Canyon Shrine Fund . . .

PHOENIX — Arizonans have contributed nearly \$145,000 toward the state goal of \$500,000 in the fund campaign for the proposed Shrine of the Ages Chapel at Grand Canyon. The nationwide goal for the shrine is a million dollars. A large portion of the fund raising effort is being dedicated to mail solicitation. Over 10,000 pieces of literature were mailed out during the early part of July.—*Phoenix Gazette*

### Dual Beauty Contest . . .

WINDOW ROCK—The face-painting ways of the pale face squaw resulted in a dual beauty contest at the Navajo Tribal Fair which took place in mid-September. One contest was restricted to girls who still live and dress in the traditional Navajo ways while the other contest was open to girls who have adopted the white man's ways by curling their hair, using cosmetics and wearing conventional American clothes.—*Phoenix Gazette*



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### Fry Becomes Sierra Vista . . .

SIERRA VISTA — This bustling town outside the gates of Fort Huachuca changed its name from Fry to Sierra Vista and then incorporated in an effort to clear the way for community improvements. The new town of Sierra Vista will have one of the highest per capita income rates in Arizona since most of the residents are scientists at the Army Electronic Proving Ground, or soldiers and civil service workers at Fort Huachuca. Ervin Fry, after whose father the town was named in 1927, said he knew nothing of the petition signed by 189 of the town's 246 property owners seeking the name change and incorporation.—*Phoenix Gazette*

### Range in Good Condition . . .

SELIGMAN—Range conditions in the Ash Fork-Seligman area were the best they have been in several years because of mid-summer rains. Cattle are in excellent flesh and sheep are doing well. Feed is bountiful and water tanks and holes have generally been so well filled that the flocks can be watered close to the feed. In the Redlands area where conditions were extremely dry in June, conditions have improved rapidly. Arizona particularly in the southern portion was hit by one of the heaviest summer rainfalls in 45 years. Numerous highways were washed out and made impassable for a number of hours on repeated occasions.—*Northern Yavapai Record*

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### Indian Lease Bill Signed . . .

WASHINGTON, D. C.—President Eisenhower signed the Indian Long Term Leasing Act which authorizes Indians to lease their restricted lands for 25 years with an option to renew for another 25 years. Limit on leases until this time had been five years. The measure was introduced by Senator Barry Goldwater (R-Ariz.). It is expected to be advantageous for both commercial development of Indian lands, whereby businessmen will have longer guarantees on operating their investments, and agricultural development because lessees will be encouraged to pay more attention to leveling, ditching and other long-range improvements. Never before have there been provisions in the Indian lease laws for options to renew.—*Yuma Sun*

### Indian Land Policy Hit . . .

SAN CARLOS—A new policy of the federal government that permits Indians to receive deeds to their allotted lands—and possibly sell them—has been attacked by the San Carlos Apache Tribal Council. The council passed a resolution against the policy, claiming that it violates the "basic principles of land use and conservation." The Apaches explained that if one of their tribe sells his land the new owner could withdraw from tribal range management groups thus destroying the program's co-operative effect.—*Phoenix Gazette*

## CALIFORNIA

### Trans-Sierra Road Urged . . .

VISALIA — Road committeemen from various Tulare County chambers of commerce unanimously voted to place the trans-Sierra Highway from Porterville to Lone Pine in the top priority category. Attending the Visalia meeting was Earl Scott, state highway engineer, who told those present that his office has been instructed to make a survey of the route for presentation in Sacramento by December 6. This survey is the result of State Senator Charles Brown's resolution passed by the Senate at the recent session of the legislature.—*Inyo Independent*

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### L.A. Seeks Desert Dump . . .

RIVERSIDE—A Los Angeles firm has started negotiations with Riverside County Board of Supervisors regarding acquisition of a desert area for use as a dump ground for Los Angeles county trash. An agent for A. N. Hahn Holding Co. of Los Angeles said the firm is seeking a site to dump 125 railway carloads of trash daily. It would be dry trash from which salvagable materials had already been taken. An area along Box Canyon Road north of Mecca was mentioned as a possible site for the dump. Riverside Supervisor Homer Varner said the company suggested \$1.25 payment to the county per carload of trash dumped, but Varner said \$5 a car would be more to the point if Riverside County was to become known as the dumping grounds for Los Angeles County. He explained that if any proposal were officially made it would have to be thoroughly checked by the Riverside County health department. Decision of Los Angeles County authorities to seek a trash dumping ground was part of their smog control program to limit rubbish burning.—*Coachella Sun*

### Desert County Talk Renewed . . .

VICTORVILLE—The *Victor Press*, advocate of the formation of a new county embracing the desert portions of San Bernardino County, has renewed its campaign for separation following the release of Victor Judicial Court records. Of 278 preliminary felony trial filings by the Victor Court handled in higher courts outside the desert area during the past two years, only 95 convictions were obtained. But, during the same period 1092 misdemeanors were filed and handled in the Victor Court with 960 convictions secured. The newspaper feels that the reason why the number of felony convictions is so low is partly due to the lack of desert personnel from the district attorney and sheriff's offices, lack of trained deputies and too few of them.

### Date Offshoots for Israel . . .

INDIO—Shipment of 1200 date offshoots from Coachella Valley ranches was scheduled to leave in August for Israel, third such shipment from the Valley to the Asian country since 1950. All three shipments were made by Don Mitchell under the direction of M. Y. Nuttonson, director for the American Institute of Crop Ecology and former senior agronomist with the USDA. The offshoot roots were bundled in wet moss and then wrapped with waterproof material. The offshoots will be under refrigeration during the entire trip. Israel will use them for experimental purposes.—*Coachella Sun*

### Centennial Celebration . . .

TWENTYNINE PALMS—Twenty-nine Palms will commemorate its centennial in conjunction with the community's eighteenth annual Pioneer Days celebration, October 5-8. In 1855 Colonel Henry Washington, engaged with a government survey party, established his camp at the Oasis of Mara and named the place Twenty-nine Palms. The combined celebration is being sponsored by the Pioneer Day Association, headed by Mrs. Sandy Whytock, president.

### NEVADA

#### Recreation Society Organized . . .

RENO—Delegates to a statewide meeting held in Reno created an organization to be known as the Nevada State Recreation and Park Society thus making Nevada the 48th state in the union to have a professional organization of this kind. W. C. Higgins, superintendent of parks and recreation in Reno, was named president of the state society. Purpose of the organization will be to further the advancement of public recreation and parks in Nevada and it becomes the first official body representing workers in this field.—*Nevada State Journal*

#### River Water Wasted . . .

BOULDER CITY—Colorado River water is being wasted but the situation is difficult to remedy, J. P. Jones, district reclamation bureau director, said recently. During June 48,000 acre feet were diverted into Mexico and July's loss may run as high as 80,000 acre feet. The waste comes about because irrigation districts using the river water order a week in advance. Sometimes their needs change after the water has been sent coursing down the river from Hoover dam. There is no way to reclaim this water for it must either be used by the districts or channeled into Mexico at the Yuma Imperial Dam station. Jones said irrigation district officials have been urged to assess their needs more carefully in the future.—*Pioche Record*

### State to Develop Fort . . .

GENOA — Restoration of the old Genoa Fort and Stockade in Carson Valley is planned by the Nevada State Park Commission. Although considered an official state park, the Genoa Fort and Stockade is presently owned by Douglas County. The state will drill a well for a water supply, install public restrooms, and carry on a program to generally develop the site after it receives title from the county. The Fort will be the first of Nevada's state parks to receive attention of the new commission because it stands alone in historical importance to Nevada and is already one of the major tourist attractions of that type in the state, Howard W. Squires, state park commissioner, declared.—*Territorial Enterprise*

#### Dam Plans Completed . . .

PIOCHE—General design and plans for the Matthews and Pine canyon dams have been completed and construction is expected to start some time next year on the twin projects, the Army Engineers announced. Preliminary estimates fixed the cost of the Pine Canyon dam at \$1,450,000 and that of the Matthews Canyon dam at \$755,000.—*Pioche Record*

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## Water Supply Varies . . .

WELLS—At mid-summer Nevada's irrigation water supply varied from completely gone to adequate. Virtually the entire northern half of the state was without irrigation water at the start of August. This critical area takes in Elko, northern Eureka, northern Lander, Humboldt, Pershing and all but the southern tip of Washoe counties. The Humboldt River, whose waters irrigate alfalfa and wild hay meadows, was practically dry. Rye Patch Reservoir is also dry leaving Lovelock Valley in Pershing County without irrigation water. Central Nevada was reported to have a very low supply of water with several ranches completely dry. The farm districts of western Nevada including the Fallon area in Churchill County, the Reno area in Washoe County, Lyon, Ormsby and Douglas counties, have adequate water to see crops and farm pastures through to maturity.—Wells Progress

## NEW MEXICO

### Indian Gains Hailed . . .

GALLUP—U. S. Indian Commissioner Glenn L. Emmons said he was "extremely pleased" with progress made in American Indian matters during the past two years. Congress, the President and Secretary of the Interior McKay have all placed their support behind current efforts aimed at eventually taking the Indians out from under government supervision, Emmons said. But, he added, it will be many years before the government can step out of Indian affairs in the Southwest and Southwestern tribes can be self-supporting.—*New Mexican*

### Air Force Scans State . . .

SANTA FE—A full-fledged fight is developing among New Mexico communities for an Air Force base which apparently has not even reached the planning stage yet. A 17-city tour by a special Air Force survey team has precipitated a battle among a number of the communities and has opened disputes between opposing factions within others. The possibility of another air base being added to New Mexico's present four was broached late in May when New Mexico congressional figures announced that the state was to be considered for a new base in the event proposed expansion plans for the Air Force were carried through.—*New Mexican*

### Abiquiu Dam Work to Start . . .

ALBUQUERQUE—Final planning will be completed and the first contract let for construction this fiscal year on the long awaited high dam on the Chama River near Abiquiu, the U. S. Corps of Engineers announced. A group of engineers from the Albuquerque office are in Vicksburg, Mississippi, studying models of the big earth-filled structure designed for flood and silt control on the river. President Eisenhower signed a bill appropriating \$425,000 for the first phase of construction. The entire project is expected to cost \$12,000,000. The flood and silt control project also calls for construction of a low dam downstream at Chamita but no construction funds for this project have been provided.—*New Mexican*

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### Apaches Refute Range Claims . . .

MESCALERO — The Mescalero Apache tribe issued a blanket challenge to the New Mexico Cattle Growers Association in particular and all others in general to compare the utilization of reservation range lands with "adjacent ranges and their conditions." The challenge was made public by Wendell Chino, chairman of the tribal business committee, as another move by the Mescaleros in their attempt to recover the Fort Stanton range lands. Disposition of the lands currently is under study by a Senate committee, with private landowners contesting the Apaches' ancestral claims to the area. The New Mexico Cattle Growers Association provoked the Apache challenge by earlier stating that "the Mescalero Apaches don't need the land in question, they don't have enough sheep or cattle to put it to productive use."—*Alamogordo Daily News*

## UTAH

### Accent on Wider Roads . . .

SALT LAKE CITY — Emphasis will be placed on keeping existing Utah highways adequate for the state's increasing traffic loads, H. J. Corleissen, road commission chairman, announced. In stating the commission's new policy, Corleissen said the state has pushed its main traffic arteries into most of the areas where they are practicable and necessary. The commission's goal will now be to build roads which will be adequate 20 years after they are completed, he said. The State is buying right-of-ways wide enough for eventual accommodation of divided highways and service roads. The widening process was given special attention on the several hundred miles of highway on the interstate system.—*Salt Lake Tribune*

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### River Project Repayment Plan . . .

SALT LAKE CITY—Governor J. Bracken Lee of Utah has suggested his state, Colorado, Wyoming and New Mexico guarantee repayment of reclamation costs of the Upper Colorado River project in order to "take the wind out of the sails of the Upper Basin opponents who argue that the whole project is a wasteful expenditure of public funds." Legislation to build the project failed during the last session of congress but will be taken up again in January. Senator Watkins (R-Utah) said Lee's plan was impractical and might delay final action for he believes it would be far more difficult to secure an agreement such as the governor proposes than to negotiate and conclude an interstate water compact. Meanwhile the Emergency Committee for Colorado River Development has asked Utah counties to levy a special two-tenths of a mill tax to raise funds for continuing the state's battle for its share of Colorado River water.

### Tourist Revenue Lags . . .

SALT LAKE CITY — Although Utah has more national parks and monuments than either of the other five Southwestern states, it ranks lowest in terms of income from tourists. Texas, with a tourist income of \$770,500,000, leads the states in the area followed by Colorado, \$265,300,000; Arizona, \$200,000,000; New Mexico, \$175,000,000; and Utah, with only \$31,700,000.—*Vernal Express*

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# MINES and MINING

## Washington, D. C. . . .

President Eisenhower vetoed a bill which would have extended the government's purchase program for seven strategic metals and minerals. The bill authorized a \$150,000,000 three-year extension of the domestic tungsten manganese, chromite, mica, asbestos, columbium-tantalum and beryl purchasing program. Eisenhower said in vetoing the bill that it would "require the government to buy far greater quantities of these materials than are necessary for defense purposes." Senator James E. Murray (D-Montana) bitterly attacked the President for his action. "The veto will result in untold suffering and distress in the homes of thousands of small American mine owners and of the miners who operate them," Murray said.—*Nevada State Journal*

## Tombstone, Arizona . . .

A new process for extracting manganese based on the principle of the "heavy media process" is in operation at the recently installed A.M.S. & Co. mill east of Tombstone. The mill regulates the weight of the solution in which materials are separated in a cone resembling a grain hopper. The heavy material, manganese, is separated from the waste material in the cone which contains a solution of water and ferro-silicon. Two air compressors put out 180-cubic feet of air a minute to keep the ferro-silicon in suspension. The mill can handle 58 tons an hour.—*Tombstone Epitaph*

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## Raton, New Mexico . . .

Kaiser Steel Corporation has purchased \$3,500,000 of coal lands from the St. Louis, Rocky Mountain and Pacific Coal Co. of Raton. Involved is the largest single area of coal land ownership in the nation—529,804 acres in northeastern New Mexico. The Kaiser purchase involves acquisition of title to 200,000 acres of coal-bearing land and coal mining rights on the remaining land. A Kaiser official said there were no plans at present to increase the scope of the coking operation at Raton and shipments will continue to be made to Kaiser's Fontana, California, steel mill for testing and development. Kaiser is at present the 12th largest steel producer in the U.S. with a capacity of 1,536,000 ingot-tons of steel annually. The sellers of the New Mexico land once operated seven coal camps in the Raton area.—*New Mexican*

## Washington, D. C. . . .

Government officials believe the shortage of copper in this country is becoming more acute with no relief in sight for many months. They attribute the situation to strikes last year and this year in some major producing areas, a booming demand for copper for automobiles, building construction and other uses, and higher prices for copper in Europe than on the U. S. market. A Commerce Department official announced that approximately 30 industries using copper have shut down or curtailed operations due to scarcity of the metal.—*New Mexican*

## Globe, Arizona . . .

Plans to start operations in the Sierra Apache Mountains north of Globe, Arizona, were announced by the Stovall-Apache manganese mine. A 500-ton portable mill costing \$175,000 was scheduled to be built at the mine in August, owner Al Stovall announced. He said he hopes to start initial shipment of concentrates from the mill by the first of October. At present stockpiling of ore is going ahead at the rate of 700 tons daily. Stovall anticipates a work force of 30 when the mill is put into operation. *Phoenix Gazette*

## Washington, D. C. . . .

California was the largest mercury producing state in the nation during the first quarter of this year with more than 300 flasks produced by the Abbott, New Idria, La Libertad, Guadalupe, Buckman and Mount Jack mines. The Cordero mine in northern Humboldt County, Nevada, had an output of over 50 flasks. Other top producers were Idaho's Hermes mine and Oregon's Bonanza. The nine producers mentioned above accounted for 91 percent of the 3950 flasks recovered in the nation—a 12 percent reduction over the last quarter of 1954.—*Battle Mountain Scout*

## Lovelock, Nevada . . .

Activity in quicksilver operations are on the increase in Pershing County and should mount considerably during the coming few years, according to Sam Bailey, local mining man. The Jackpot Oil Co. of Denver, Colorado, has taken a lease on the Earl Simpson property. Bailey reports that drilling will be done on the Virgil Olson property near Mount Tobin in eastern Pershing County as well as at the Antelope Springs quicksilver district.—*Pioche Record*

## Mina, Nevada . . .

The Gabbs Exploration Company has acquired the holdings of the Mina Development Company. Gabbs Exploration is headed by J. Dougan, successful tungsten mine operator in the Gabbs area. Involved in the sale were 13 claims in a rich cinnamon region east of Mina including the Lost Steers group and the Mina Mercury property which in former years had produced a large quantity of quicksilver.—*Nevada State Journal*

## Dove Creek, Colorado . . .

Gulf Oil Company announced that a drill stem test on its Coalbed Canyon wildcat 15 miles southwest of Dove Creek showed 77 feet of porous oil and gas bearing formation. The company indicated that the well might produce as much as 22,000,000 cubic feet of gas daily. The Coalbed wildcat is situated on a 26,150 acre unitized area, principal leases of which were obtained by Gulf in an arrangement with Three States Natural Gas Co.—*Dove Creek Press*

## Ruth, Nevada . . .

Important new machinery and improved methods of operation have increased the yield of copper per ton of ore mined at the Nevada Mines division of Kennecott Copper Corporation in White Pine County, according to the organization's annual report. Some 20.18 pounds of copper were recovered from each ton of ore mined last year compared to 19.58 pounds per ton the previous year. The company plans to mine 20,000,000 tons of ore during the next decade at its Ruth operation. The open pit mine will eventually be the second largest in the area. When fully completed it will be 2450 feet long, 1500 feet wide and 850 feet deep.—*Battle Mountain Scout*

## Lucerne Valley, California . . .

The Permanente Cement Company will expand its operations into Southern California with the construction of a \$12,000,000 cement plant at the Cushenbury limestone deposit near Lucerne Valley in San Bernardino County. The plant is designed for an initial capacity of two million barrels of Portland cement annually and is scheduled to begin production in the early fall of next year.—*Victor Press*

## San Francisco, California . . .

A new printing of the guide to the mining laws of California for use by prospectors and miners has just been released by the California State Division of Mines. The pamphlet, entitled "Legal Guide for California Prospectors and Miners," was compiled under the direction of L. A. Norman of the Division of Mines staff. It is priced at 25 cents and may be ordered from the Division of Mines, Ferry Building, San Francisco, California. — *Barstow Printer-Review*

## Las Vegas, Nevada . . .

Federal government policies with respect to the domestic mining industry will be among major program topics at the October 10-13 industrial minerals conference of the American Mining Congress at Las Vegas, Nevada. More than 2000 miners are scheduled to attend the 17 sessions, four of which will be devoted solely to uranium production questions and five of which will deal with practical problems of underground, open pit and ore treatment of minerals. Labor relations, public relations, administration of mines, tariffs, taxation, stockpiling and mining law will be handled in other sessions. Co-chairmen of the conference are Roy A. Hardy of Reno and Hewitt S. West, Las Vegas.—*Salt Lake Tribune*



# BOOM DAYS IN URANIUM

## Uranium Production at Record Level, AEC States in Report

Domestic prospecting, exploration and ore processing are all on the upswing with uranium production at record levels, the Atomic Energy Commission declared in its 18th semi-annual report, issued recently. Plans to expand uranium ore processing facilities in the New Mexico-Arizona area to keep pace with rapidly increasing production were also disclosed in the report. Without explanation, the commission stated:

"Negotiations are in progress for construction of a plant in the Cameron area of the Navajo Indian Reservation in Arizona; construction of another plant by Anaconda in the Bluewater area of New Mexico is proceeding rapidly with completion expected soon."

The report highlighted the intensive search for uranium on and away from the Colorado Plateau. The AEC said uranium ore is still being produced faster than it can be processed. Within a few months 17 ore-buying and sampling stations will be in operation.

The commission said that uranium concentrate production continued to increase

during the first half of 1955 and "further sharp increases over the next 18 months are assured as a result of construction programs now under way or about to start." The number of producing mines in the United States numbered approximately 850 in June compared to about 795 a year ago. —*New Mexican*

### Mineral Grantee Opens Land Near Taos, New Mexico

The Monarch Mining and Development Co. of Denver has opened 18,000 acres of land northeast of Taos, New Mexico, to uranium prospecting on a permit and royalty basis. Monarch owns the land grant mineral rights on the land which is embraced by Carson National Forest. If commercial ore is discovered, the company will have the privilege of setting the price and terms to buy or sell, whichever the prospector desires to do. The price to the prospector will be based on 10 percent royalty on all ore mined. There will be no charge for the prospecting permits which will allow the prospector an area of 250 acres on which to hunt for the mineral. Company address is 1699 Lincoln St., Denver, Colorado. —*New Mexican*

### Moab Uranium Co. Votes Dividend for Stockholders

Moab Uranium Co. of Utah became the first uranium corporation with headquarters in Moab to vote a cash dividend. The payment, 10 percent on the par value of the company's five-cent stock, was approved by stockholders at the firm's recent first annual meeting.

Moab Uranium started operations in July of last year financed by a \$125,000 stock issue. Net worth of the company has increased to \$922,266. The company owns or has interest in more than 2000 mining claims, including a number of producing properties. —*San Juan Record*

### Three Men File Record 314 Lode Claim Bloc

The largest bloc of mining claims in San Bernardino, California, county's history was filed recently by Grant Longacre of Needles, P. J. Hillgardt and Jock Hemmingway. They filed location notices on 314 lode claims. The claims all bear the designation "Sawtooth" and are located south of Needles and southeast of Welch Well in the Sawtooth Quadrangle. Land area covered by the claims was estimated at 6280 acres.

The 314 claims brought the total mining documents filed in the county to 9738, a six-month total which easily surpasses the entire 1954 figure of 7932 claims. —*Desert Star*

A uranium find in the Gold Peak area, 16 miles southeast of Twentynine Palms, California, was announced by Albert H. and Milton B. Smith. Ore sample assays range from .14 to 1.44 percent. —*Desert Trails*

### A-Reactor Scheduled for Albuquerque Medical Clinic

General Dynamics Corp. announced that construction is scheduled to begin soon on an atomic reactor for medical and biological research in Albuquerque, New Mexico. The 1000 kilowatt reactor will be installed at the Radiation Therapy Center of the Lovelace Foundation Institute of Nuclear Medicine and Biology.

Dr. W. Randolph Lovelace II, director of the Lovelace Foundation, said he expects the reactor to be operating in a three story building in Albuquerque by the end of next year. It is designed for treatment of certain types of cancer and also to train doctors, radiation technicians and physicists. Cost of the entire installation, including the building to house the reactor, will amount to about \$2,500,000. —*New Mexican*

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# Prospecting by Helicopter Over Rugged Land Saves Time

Although its use by uranium prospectors is limited because of the \$100-an-hour expense, the helicopter has brought dramatic gains to those who would search out the precious radioactive ores from the air. The helicopter gives the prospector a new view of little-known terrain by hovering motionless, flying up precipitous walls or dropping into narrow defiles. With a 'copter a man can learn more of the country in an hour than he could in a month by jeep or in a year on foot.

The technique worked out for prospecting unknown areas for uranium by Aero Copters, Inc., of Seattle, Washington, and the Mid-Continent Uranium Corp., is a simple one. First the area is surveyed by a mining superintendent in a light plane who notes

all formations that promise to contain the primary pitchblende, uraninite ores or the yellowish carnotite. Then the helicopter is flown over these areas for a closer look and scintillometer readings are taken. — *Pioche Record*

Utaco Uranium, Inc., reported discovery of uranium ore in three exploratory drilling operations recently completed on its Coal-Bed Canyon claims southeast of Monticello. Two of the three discoveries were of commercial-grade ore, the veins measuring one and four feet respectively. The third vein detected was classed as low-grade ore and measured eight feet. *San Juan Record*

Southwest mining circles report that a limited rush to file lithium claims in the Gunnison, Colorado, area was continuing despite the AEC's refusal to comment on whether or not it was using or purchasing lithium ore. Some observers believe the latest thermonuclear bomb contains a lithium deuteride fission core, although it has never officially been confirmed. *Dove Creek Press*

In an apparent effort to develop possible new uranium deposits, the Interior Department announced that it will allow further prospecting in the Lake Mead recreation area. — *Yuma Sun*

## Uranium Find Promises New Life for Nevada Ghost Town

A rich uranium strike in Nevada's Excelsior Mountain range has reawakened the ghost town of Marietta. Assay samples of uranium oxide have run as high as six and eight percent. Marietta lies approximately 25 miles from Mina in Mineral County and the uranium strike, called Silver Bell, lies on a fault eight miles long varying in width from 200 to 800 feet. It was discovered by James D. Gish and Frank A. Nottelman, both of Mina and Dr. Milo of Vallejo. The property has been taken over by Nevada Consolidated Uranium Co., headed by Wm. J. Graham, Sam Potter and R. W. Van Duzen.

Marietta first sprang to life in 1905 when silver and gold were discovered there. The area recently attracted widespread attention following the release of the AEC's report confirming geologists' findings of primary uranium ore consisting of uranophane caused by hydrothermal action. A fringe area contract has been issued to the developers for acceptance of the ore at the railroad at Mina. Average shipping ore from the deposit has run .67 percent.

## New Report Tells Basis for Colorado Plateau U-Deposits

Unique geologic features of the Colorado Plateau which account for some areas there having a great concentration of uranium ore while others lack that prized mineral, are set forth in a report by Dr. Vincent C. Kelly, professor of geology at the University of New Mexico in Albuquerque. This book is the fifth in the series of University of New Mexico Publications in Geology and was prepared in cooperation with the AEC's Division of Raw Materials.

Principal objective of the study, Kelly said, was to determine the relationship between regional structure and regional concentration of uranium deposits. The report consists of a description and analysis of the regional tectonics, a geologic history of the area, and a discussion of the tectonic influence on distribution and origin of uranium. Included in the publication is a large five-color geologic map of the plateau. *Alamogordo Daily News*

## New Regulations Issued for Shippers of Uranium Ores

Both licenses and contracts are now required of uranium ore shippers who are engaged in transporting raw materials to the new AEC buying station at Cutter, Arizona. Inquiries should be referred to the AEC office at Grand Junction, Colorado. Under Federal Law no one may ship or sell uranium without a license. In addition, a producer must obtain a contract calling for maximum amount of ore to be delivered during a six month period. *Palo Verde Times*



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## Thorium May Become Chief Source of Atomic Power

Thorium may become more valuable in the production of large quantities of cheap atomic power than uranium, for it is about four to 10 times more abundant. While not fissionable in its natural state, it can be transmuted into Uranium 233—a highly efficient nuclear fuel.

The man-made U-233 has certain advantages over uranium in some types of nuclear reactors which promise to make the nuclear reactor using thorium potentially the reactor of the future. U-233 can be created out of thorium in a nuclear reactor, just as plutonium, the original man-made nuclear element, is created out of nonfissionable uranium 238. The thorium-derived U-233 has been found to be much more efficient and practical as a nuclear fuel than plutonium. The nuclear reactor regarded as the atomic power plant of the future is the "breeder" type which not only regenerates its fuel, but creates more fuel than it consumes.—*Salt Lake Tribune*

## Unitah Has 7000 Uranium Claims; None Show Profit

Over 7000 claims have been recorded in Uintah County, Utah, but to date not a single one of these has made any profitable returns, geological and mining experts disclosed. On the strength of neighboring rich uranium country, millions of penny shares have been sold by promoters of the Uintah discoveries. *Vernal Express*

Hundreds of uranium claims have been filed in the Cottonwood Canyon region in the Table Mountains of Churchill and Pershing counties in Nevada.—*Humboldt Star*

## Uranium, Solar Energy Sites Surveyed on Mojave Desert

A group of San Francisco physicists surveyed the Mojave desert area around Barstow, California, for uranium bearing ores and possible locations for solar power installations. Berry Porter was in charge of the survey. He reported that recent radioactive mineral finds in the area are encouraging and that only a scientific inventory of resources would give an accurate picture of the potential which may exist. The physicists used photography, weather instruments, radiation devices and other scientific apparatus in their dual purpose study.

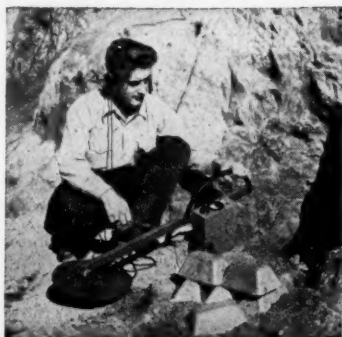
Porter worked at Oak Ridge on atomic devices and since 1945 has been concerned primarily with peacetime uses of atomic energy. He hopes the survey will come up with an accurate estimate of the area's energy potential. *Barstow Printer Review*

## Uranium Price Revision Seen By Former AEC Official

Dr. Phillip L. Merritt, for many years head of the Atomic Energy Commission's exploration effort and now in private business, predicted a continuing rise in the rate of uranium discovery. Dr. Merritt said he believes that in the long run the uranium industry and the AEC will have to agree on a fixed price for concentrates produced by uranium mills. This would not seriously affect the fortunes of small miners in the industry, he added. Under present procedure, the AEC negotiates individually on prices for concentrates produced by privately-owned mills.

"There obviously will have to be a reorientation on price. Possibly vanadium will be dropped from purchasing schedules for uranium-vanadium ores," Dr. Merritt declared.—*Salt Lake Tribune*

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## Laguna Indians Making Big Money in Uranium

The Laguna Indians, on whose land is located the Jackpile uranium mine, will receive \$75,000 a month this year from uranium royalties, the Bureau of Business Research of the University of New Mexico has said.

The Bureau reported that uranium had the greatest activity of any mineral in the state in 1954. In Eddy County alone, 500 claims were filed in a four-month period, while uranium-bearing minerals have been found in 23 of the 32 counties in the state.

Most of the production is centered in the Gallup-Grants-Laguna area of northwestern New Mexico. This area has become one of the leading uranium-producing regions in North America. The fact that uranium is being found on Indian lands is an evidence of compensating justice. Indian lands are seldom fertile. *Mining Record*

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## Uranium Ore Found Near Ely, Nevada

A White Pine County uranium deposit, recently inspected by officials from the Atomic Energy Commission headquarters in Utah, has been discovered in Telegraph Canyon northeast of Ely and ore from the claim is said to compare favorably with some of the best producers.

The uranium deposit was found by A. L. Ruggles, of Cherry Creek. It is in the Telegraph mining district and ores include autunite and torbernite. Ruggles has a 25-foot shaft sunk in the vein and expects to continue sinking until he reaches water level, where he expects to find pitchblende. *Ely Record*

Formation of a new organization to be known as the National Committee for the Betterment of the Uranium Industry was announced in Moab, Utah. George J. Sullivan, president of the new group who also heads the North Standard Mining Co., said the organization will be active in all ways that will create good public relations for the industry as a whole. Initial project was a good will visit to Los Angeles by 25 Western uranium men in late August. Membership in the non-profit organization will be open to all legitimate mining company representatives and to those serving the industry, Sullivan said.—*Dove Creek Press*

## SEC Halts Stock Sales Of 12 Mining Companies

The Securities and Exchange Commission temporarily halted stock sales by 12 uranium and other mining companies in six Western states because of alleged violations of SEC regulations. The action took the form of suspending the privilege of issuing stock under SEC's small companies procedures. The firms may have hearings on request on whether the suspensions should be lifted or made permanent.

Companies involved were Lilly Belle Mining and Milling Co., Inc., Colorado Springs, and Southwestern Uranium Trading Corp., Denver, Colorado; American Mining and Smelting, Inc., Spearfish, S.D.; World Uranium Mining Corp., Salt Lake City, Utah; Rock Creek Tungsten Co., Missoula, and Pony Tungsten Enterprise, Pony, Montana.

Lucky Custer Mining Corp., Boise, Rescue Mining Co., Warren and Bellevue Mining and Concentrating Co., Hailey, Idaho; and three Spokane, Washington, companies: Gibbonsville Mining and Exploration Co., Butte Highlands Mining Co. and U. S. Gold Corp.—*New Mexican*

The Army revealed recently that papers purporting to permit entry onto the Yuma, Arizona, Test Station for mining or quarrying issued prior to August 1 are no longer valid. Future requests and requests for renewal will be processed if accompanied by accurate descriptions and specific map locations including routes of ingress and egress. Any authorization for entry for mining purposes will be contingent upon favorable action by the AEC or other appropriate government agency.—*Yuma Sun*

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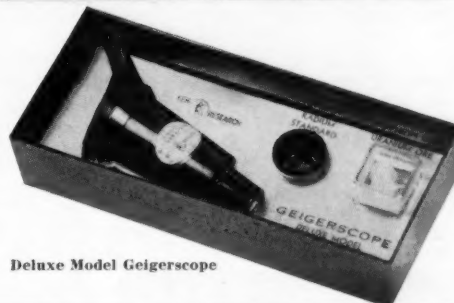
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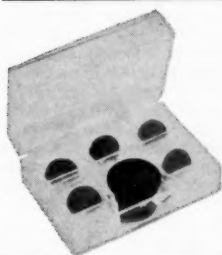
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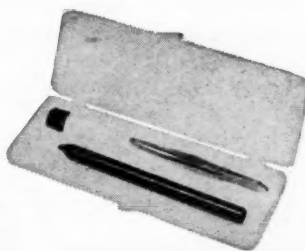
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# GEMS AND MINERALS

## Gem and Mineral Societies Announce Fall Show Dates

After a summer of reduced activity, many gem and mineral societies will enter the busy fall season with shows. Those planning late September and October shows include: September 22-25, Santa Cruz, California, Mineral and Gem Society's annual show, held in conjunction with the Santa Cruz County Fair at Watsonville; September 27-30, Eastern Federation of Mineralogical and Lapidary Societies and American Federation of Mineralogical Societies

joint convention and show, Shoreham Hotel, Washington, D. C.

October 1-2, Loveland, Colorado, 10th Annual Stone Age Fair of the World, community building.

October 1-2, Humboldt Gem and Mineral Society's second annual gem and mineral fair, Carson Memorial Building, Eureka, California.

October 8-9, Hollywood, California, Lapidary and Mineral Society's eighth annual show, Plummer Park club house, 7377 Santa Monica Blvd., Los Angeles.

October 8-9, All-Seattle, Washington, Gem and Mineral Show, civic auditorium.

October 15-16, Searles Lake Gem and Mineral Society's show at the Trona Recreation Center, Trona, California.

October 15-16, San Fernando, California, Gem and Mineral Society's 11th annual show, Victory Van Owen playground, North Hollywood.

October 22-23, Orange Belt Mineralogical Society's annual show, Orange Show Grounds, San Bernardino, California.

October 22-23, Whittier, California, Gem and Mineral Society's sixth annual show, Smith Memorial Hall.

October 29-30, San Antonio, Texas, Rock and Lapidary Society's show.

## CALIFORNIA FEDERATION ELECTS NEW OFFICERS

Vincent Morgan of the Mojave Mineralogical Society and a resident of Boron was elected president of the California Federation of Mineralogical Societies at the 16th Annual Convention held this summer in San Francisco.

Officers who will serve with Morgan include: Jack Klein of Bartow and the Mojave Gem and Mineral Society, vice president, minerals; Jessie Hardman, Long Beach Gem and Mineral Society, secretary; and Alden Clark, San Francisco Gem and Mineral Society, treasurer. Wm. Stephenson will continue as lapidary division vice president.

Mary Frances Berkholz of the Pearblossom Gem and Mineralogical Society was re-appointed Federation Field Trip Chairman. Plans call for state-wide coordination of field trips, the issuance of four field trip bulletins and a Desert Seminar this winter.

A new Federation service, assisting member societies file claims on gem collecting sites was established. Clarence Bonner of the Orange Belt Mineralogical Society was appointed chairman of the Mineral Claims Committee. Pearblossom, California, Gem and Mineralogical Society's Joshua Nuggets.

• • •

One of the outcomes of the recent California Federation convention in San Francisco was the creation of a rockhound bulletin editor's association. Vivienne Dosse of Fontana was elected editor-in-chief of this new organization; Harry Zollars of El Paso, Texas, assistant editor; and C. R. Rice of San Jose, secretary. Hopes are to make this a nationwide association with annual meetings at the state convention. Members will exchange bulletins and ideas. Verdugo Hills, California, Gem and Mineral Society's *Rockhound News and Views*

• • •

Members of the Pasadena, California, Mineralogical Society of Southern California elected Gus Meister president for the coming year. Others named to office were Bob Brewer, vice president; Connie Flick, secretary; Aubert Johnson, treasurer; Louis Vance, federation director; Kenny Tharp, Peggy Powell, Dwight Webber, Jack Roddekoer, Wendell Stewart, Bruce Lee and Willard Perkin, directors. Retiring president John Powell, was presented with a beautiful specimen of wulfenite by the society.

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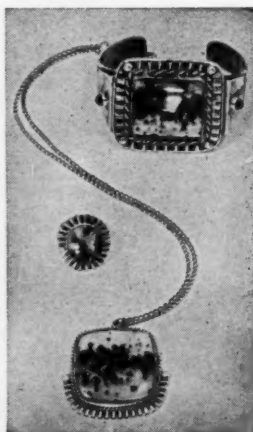
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The following seven forms belong to the Normal Class:

**Cube** (hexahedron) is the regular solid of six equal sides. A cube is bounded by six similar faces, each face being a square.

**Octahedron** is formed by eight equilateral (all sides equal) triangle faces.

**Dodecahedron** is bounded by 12 faces, each of which meets two of the axes at equal distances and parallel to the third axis. Each face is a rhomb.

**Tetrahexahedron** is a solid having four faces and six sides. The tetrahexahedron is bounded by 24 faces, each of which is an isocles (two equal sides) triangle. Four of these faces together occupy the position of one of the cube.

**Trisectahedron** is bounded by 24 similar faces each of which is an isocles triangle and three together occupy the position of an octahedral face.

**Trapezohedron** is bounded by 24 similar faces each of them a quadrilateral. Three of the quadrilaterals occupy the position of an octahedral face.

**Hexoctahedron** is bounded by 48 similar faces, each of which is a scalene (unequal sides) triangle, and intersects the three axes at unequal distance. Compton, California, Gem and Mineral Club's *Rockhound Call*.

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Lithium is a widespread element but economic concentrations are sparsely distributed. The lithium gems are tourmaline, kunzite, hiddenite and lepidolite.

Tourmaline is pink, black and varicolored. It may be pink at one end and blue-green at the other, or a yellow-green gradually shading off into dark green. Kunzite is the lilac colored crystal discovered and named by G. F. Kunz. It was for a time the only exclusively American gemstone. Hiddenite is a small green crystal. It was named after W. E. Hidden. Lepidolite, while not suited for faceting, can be cut and polished and is displayed as bookends and spheres. It is a granular mass of lavender or lilac and some specimens contain sprays of pink rubellite.

From 1900 to 1927 the Pala district in San Diego County, California, accounted for virtually all of the U. S. production of commercial lithium. At present there are two other lithium mines, one in the Black Hills of South Dakota and the other in the Kings Mountain area of North Carolina. Delvers' Gem and Mineral Society's *Delvings*.

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A gift of jade is often made to the dead to help them on their journey to heaven. True jade has an incomparable tonal beauty when properly suspended and gently struck. White jade represents heaven and the ancient Chinese Emperors communicated with the higher sphere by using a carved disk of white jade.

Ancient jade is a phrase referring to jade carvings known to have been made prior to 221 A.D. It is said that a pillow of carved jade was made for the last ruler of the Yin Dynasty in 1120 B.C. (Above information secured by Zelma Thieme, president of the Delvers' Gem and Mineral Society, Downey, California, from an expert jade carver of San Francisco's Chinatown.)

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Wet Rolls

3" wide, 10 ft. long—\$2.00;	150-foot roll—\$21.60
10" wide, 40 in. long—2.60;	150-foot roll—71.25

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## CONCRETIONS PLACED INTO THREE GENERAL CATEGORIES

Concretions fall into three broad groups. fossils of organic origin; paramorphs; and chemical segregations in clay.

The first group, fossils, are of organic origin and are generally formed around a nucleus of phosphatic or nitrogenous material dropped into an area of so-called black muds which are already saturated with sulfides and oils from decaying organic matter. These muds are generally found on the continental shelf, but at depths below wave action — 250 to 500 feet. The causative agent is a chemical reaction complicated in nature between the humic acid, sulfides, carbon and phosphate of the organism itself, and the physical movement of the forming body by gentle current action of the depths. Concretions of this type nearly always show the organic nucleus when broken open.

Paramorphs such as the barite and selenite roses represent the physical replacement of an original substance by one of a totally different nature, or the replacement of organic remains by limonite, pyrite or other minerals. In this group are the concretions or porous and loosely coherent material penetrated by barite, calcite, magnesium and other solutions that meet a crystallizing medium such as carbon.

All clays contain some iron, generally in the form of siderite, limonite or goethite. These in common with most minerals tend to segregate in localizing area, forming a hard area in the clay. They are always roughly circular or oval or a combination of the two. These may resemble almost any object and are frequently mistaken for petrifications. Montebello, California, Mineral and Lapidary Society's *The Braggin' Rock*

## BRAZILIAN DIAMONDS ONCE BROUGHT PRICES DOWN TO \$5

The alluvial diamond deposits at various places in Brazil were discovered in an accidental manner. The rich mines of the Province of Bahia were first made known by a slave who had previously worked in the diamond mines of Minas Geraes.

In 1727, a Portuguese visiting the gold mines of Sierra de Frio, north of Rio de Janeiro noticed some odd looking pebbles and crystals which the placer miners had picked up and treasured as trifles. These proved to be diamonds, and this discovery calls to mind the similar manner in which years later the African fields were discovered.

The yield of Brazilian placers was at the outset enormous and huge quantities dumped into the European markets brought consternation among diamond dealers. The price of the gem dropped to about \$5.00 per carat, and some believed the gem would become as common as quartz. Finally the Brazilian government took control of the workings, regulating the production and exacting a royalty.

The placers of Brazil still produce small quantities of diamond but they are no longer an important factor in the world markets. The district of Minas Geraes is said to have a total production of about two tons in weight of rough diamond, but very few large size stones were encountered. (From *The Mineralogist*.)

Miles City, Montana, now has a rockhound club, the Semaca Rock Club. President of the organization is Mrs. Darrel Gudmundson. Miles City is located in the heart of the Montana moss agate country. *Sooner Rockologist*

## SALES INDICATE RINGS ARE PUBLIC'S FAVORITE JEWELRY

Gem hobbyists may wonder how their tastes compare with those who purchase jewelry. *Jewelry Magazine* gives the following national sales breakdown for 1954:

Percent Sales Women's	
Rings, diamond	54.1
Rings, others	24.1
14K gold jewelry	11.1
Diamond jewelry, other than rings	5.5
Cultured pearls	5.2
Costume Jewelry	
Earrings	34.8
Necklaces	19.5
Sets	17.6
Bracelets	13.3
Pins	8.8
Other	6.0

Percent Ring Sales Other Than Diamond	
Precious or synthetic ruby	27.1
Onyx	21.0
Zircon	7.6
Precious or synthetic sapphire	6.7
Garnet	6.4
Amethyst	5.6
Aquamarine	4.2
Initial rings	3.6
Cultured pearls	3.3
Emerald	2.7
Others	11.8

— Evansville, Indiana, Lapidary Society News Letter

## TIPS FOR THE LAPIDARY

These ideas appeared in the *Dona Ana County Rockhound Bulletin* of the Dona Ana Gem and Mineral Society.

"H. L. Zollars has devised a way to hold small odd-shaped stones for sawing. He uses slow setting, outside stucco, without the sand and mixes it with water to form a heavy or thick paste and places the mixture with the small stones on top in an old paper milk container until completely dry all the way through. This block or brick is easy to clamp firmly in the saw vise thus simplifying the sawing of these stones. It is necessary that the stones are clean before setting them in this mixture and that one stone does not touch the other. Plaster of Paris can be used but some have complained that it is not as dependable as stucco.

"A number of complaints have been made when using water and water mixtures as a lubricant for the saw as well as objections to the smell of kerosene mixtures. Mr. E. J. Mueller takes equal parts of Corvus oil and White oil which he obtains from the Texas Oil Company and says it provides an excellent coolant and lubricant for diamond saws and is very economical."

To be classed as a gem, a stone must first be beautiful and it must be rare, members of the Indiana Geology and Gem Society learned at a recent meeting from speaker John Goll, Jr., of the Baldwin Miller Company. It must also be durable to be of lasting value. In that respect, diamond excels, since it is 85 times as hard as the next hardest substance, corundum. Emerald, ruby, sapphire and alexandrite all have greater value than diamond, but all these are so rare that they are practically never found. (From the *Geologem*, bulletin of the Indiana Geology and Gem Society.)

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## SPECIFIC GRAVITY KEY TO MINERAL IDENTITY

The specific gravity of a mineral is a character of considerable importance in mineral identification. Specific gravity is simply defined as a number that expresses the number of times heavier a given volume of a mineral is than an equal volume of water.

The specific gravity of a mineral is quite constant provided there is no variation in composition. Most of the sulfide, oxide, carbonate, chloride and fluoride minerals will have a fairly constant specific gravity. Differences in crystalline form and presence of impurities are the chief causes of weight variation.

Many species of minerals have a greater or lesser variation in chemical composition. Typical of minerals in this group are the silicates, some hydrated oxides, niobates, tantalates and borates. These composition changes cause variations in specific gravity which may amount to 0.8 of a unit of specific gravity.

The specific gravity of gold varies from 15.6 to 19.3 while gypsum's specific gravity is only 2.3. Specific gravity is dependent on chemical composition. There are some instances where changes in specific gravity are due to states of molecular aggregation as in the case of graphite (2.0) and diamond (3.5) both of which are composed of carbon. Fresno, California, Gem and Mineral Society's *Chips*.



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# Remarkable Growth of Rock Hobby stems from Family Fun

Gem collecting and polishing is the nation's fastest growing hobby—a remarkable fact when you consider the comparatively small amount of money and effort that have been spent in promoting it.

This remarkable growth can probably be attributed to the fact that the rock hobby is a family affair—a hobby in which the en-

tire family can indulge—any day of the week and any hour of the day. Bad weather might keep the family out of the field but has no effect on indoor work by the amateur lapidaries. Vacation trips are turning into material collecting journeys. Souvenirs adorn the person, home or office as lasting remembrances of pleasant family outings.

Any school-age child can become a talented rockhound and gem polisher as can older folks. Another circumstance that has proved attractive to gem hobbyists is the fact that gem polishing can be profitable. Many lapidaries have been able to sell their entire production. Some men have quit their old jobs to go into gem production full time.

The gem polishing hobby is not difficult to learn and improved skill just comes naturally with practice and experience. Also important is the fact that the hobby is very educational. Actually the rockhound is an amateur geologist with the wide outdoors as his classroom.

And then there are the wonderful people you meet in your gem club. People who are willing to share information and time with you. Arlene Dimick in the *Graham County, Arizona, Guardian*.

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## BERYL ORES PRODUCE MANY PRECIOUS STONE VARIETIES

Beryl is the chief ore of beryllium and the clear transparent gem varieties of this mineral are emerald, very green; morganite, pink; aquamarine, blue and blue-green; golden, light yellow; goshenite, clear white; and the greens which are not green enough to classify as emerald which are called green beryl. This latter category includes the distinctive yellow-green davidsonite.

Beryl is insoluble in common acids. It is apt to have a silky sheen and the silk runs lengthwise to the crystal, but the parting lines run crosswise. Beryl is usually found in old pegmatites which have been weathered at the surface. Dona Ana County, New Mexico, *Rockhound Bulletin*.

Why are private collecting areas sometimes closed to rockhound clubs? The Pearblossom, California, Gem and Mineralogical Society printed a case in point in its bulletin, *Joshua Nuggets*. The Pearblossom club and eight others recently spent a weekend on private land, picnicking and collecting. Of the nine clubs taking part in the fun, only the Pearblossom club had permission from the owners to use the area.

Carl R. Hoffman was elected president of the Earth Science Club or Northern Illinois, along with Howard M. Knight, vice chairman; Mrs. George L. Darrow, recording secretary; Mrs. Walter A. Bonow, corresponding secretary; G. J. Prepp, treasurer; George L. Darrow, editor; O. M. Fether, circulation manager; Max L. Hillmer, publicity; Mrs. John G. Schnizlein, historian; J. Schnizlein, field trip chairman; Ray Bish, curator; Mrs. Ray Bish, librarian. *Earth Science News*

F. C. Peterson, noted mining and mechanical research figure, judged the mineral and mining department of the 17th District Fair, held in Grass Valley, California, in August.

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- 1—Borax.
- 2—Ceremonial purposes.
- 3—Creosote.
- 4—Lost mines.
- 5—Douglass.
- 6—White Mountains.
- 7—San Juan River.
- 8—Cacti.
- 9—Atomic Energy development.
- 10—Quartz.
- 11—Ute Indian.
- 12—Conservation.
- 13—New Mexico has 122,000 square miles, Arizona 114,000, Nevada 111,000, Utah 85,000.
- 14—Glenn L. Emmons.
- 15—Green River.
- 16—San Jacinto Mountains.
- 17—Grand Canyon.
- 18—Arizona.
- 19—Supai Indians.
- 20—Ashfork, Arizona.

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# AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of the Lapidary Journal

As one who began his serious collecting career on the beach at Redondo Beach, California, gathering so-called "moonstones," we have always been aware of the word whenever we see it in advertisements and we have always been skeptical of the word unless it was enclosed in quotes, for then we knew that true moonstones were not being offered. Through all the years we doubt if we have seen real moonstone rough offered for sale more than a couple of times by anyone.

When moonstone rough began to be offered for sale in just about every color of the rainbow about a year ago we became very skeptical and wanted to see it and cut it and get the story as to why it apparently was a recent discovery. We have secured that story for our readers through our Indian correspondents, Pitamberdass Mohanlal & Sons in Bombay.

Before reporting these facts however it would perhaps be wise to correct the understandable mistakes that rockhounds make regarding moonstones. First of all we advise that no true moonstone occurs in America that may be cut as gems. The rockhound too often is inclined to refer to chalcedony as moonstone because it has a slight adularescent effect. However when the cutter compares the finest stone of this type with a genuine moonstone a great difference in the moonshine effect is readily apparent.

The stones found on the beaches of Southern California that appear somewhat like moonstones are not genuine. They are chalcedony, which is quartz, whereas genuine moonstone is a term correctly applied to adularia (precious moonstone) which is a variety of orthoclase and to other semi-transparent to translucent adularescent (milky blue) feldspars of the albite, labradorite and oligoclase species. The term is incorrectly applied, without a proper qualifying prefix or quotation marks, to milky and girasol varieties of chalcedony, scapolite, corundum etc.

The moonstones that used to be found at Moonstone Beach on Catalina Island are nodules of quartz weathered out of a rhyolite rock composed of sanidine feldspar and quartz and come closest to a good imitation of true moonstone. The pebbles found at Redondo and Pescadero beaches are agate and chalcedony from amygdaloidal rocks. Very rarely a piece of sapphirine chalcedony will be found which has given rise to the silly story that that is how the phrase "once in a blue moon" originated, as the times between finding such stones is usually a long period. Another silly idea, current in Southern California, is that when the moon and the sun reach a certain juxtaposition the blue moonstones will then be prevalent on the beaches for this is called a "blue moon." Science has a more plausible explanation of the blue moon but it has no part in this story.

There is a rock family called the plagioclase-feldspars that contains several interesting varieties of rock, all ranging in hardness from six to six and one-half on the Mohs scale. They are albite, oligoclase, andesine, labradorite, bytownite, and anorthite. All of these groups give the amateur interesting gem cutting materials. The first group (albite) gives us aventurine, often misspelled as "adventurine," but the popular material for the lapidary is a green quartz variety. Labradorite is noted for a beautiful

play of colors displayed by the cleaved surface. This iridescence is caused by the lamellar structure, parallel to the less perfect direction of cleavage, resulting from the effect of repeated twinning. The natural color is drab but forms an effective screen for the brilliant green, yellow and red colors that sweep over the cut gem when it is moved. Sometimes labradorite is found in a transparent state and it is then referred to as black moonstone. It is named after Labrador where it was first found.

Sometimes feldspar occurs with inclusions of iron, hematite or goethite scattered within the structure. These appear to give self-luminescence to a cut gem and a spangle-like effect is produced when the crystals are flaked. When the flaking occurs the gem is properly called aventurine feldspar.

The moonstones of various colors now coming in from India were discovered about three years ago. Despite their existence no one realized the gemstone quality of the stones long used for mixing in concrete in construction work. One of the representatives of Pitamberdass Mohanlal & Sons in Bombay happened to be watching some construction work and he picked up a handful of the stones and brought them into Bombay for examination. They were analyzed and to the great delight and surprise of the firm they were found to be orthoclase, the rough stones clearly showing the planes of the feldspar.

The stones come from a place known as Kangayam in South India, a place comparable to Brazil in the great variety of semi-precious stones found there. No regular mining operations have been carried out, but anyone who is interested may contact the owners of land and start digging operations for a "consideration," as our Indian friend puts it. The natives have become aware of the value of the better stones and they gather them from the surface and bring them in to the gem merchants. Dig-

ging indicates that the stones are found to a depth of six to eight feet and some have been found as deep as 30 feet beneath the surface. These are reported to be superior and possess a powerful silver sheen. Most of the stones are cut in Bombay and some are cut in Jaipur.

It is reported that most of the impurities in the rough material can be readily detected before cutting; that the stones are easily cut; that dry sanding should never be used; that local professionals have found a wheel of grainless wood gives a high polish in about a third the time taken by a felt buff.

Many of the stones portray asterism in the form of a four-pointed star while others show a pronounced cat's eye effect. Sometimes a rare ladder-like effect is seen where the colors of green and amber appear as alternate stripes. Most of the pieces yield 5 to 10 carat stones but some 100 carat beauties have been cut for collections, although these are not practical for the jewelry trade.

The favorite cutting material, outside of opal and jade, of the amateur gem cutter is star stones, moonstones, and cat's eyes. The new Indian material is the only material that appears to yield all three phenomena. The material occurs in white, milky, green, yellow-green, pink, red, black, maroon, buff and brown colors; in various shades of the foregoing and, rarely, in two shades formed in a step pattern.

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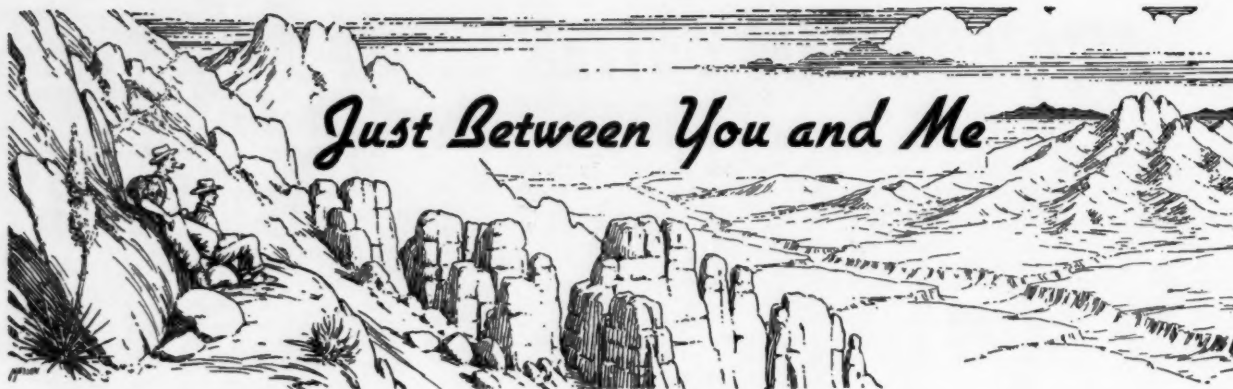


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By RANDALL HENDERSON

**A**CCORDING TO a news release from the office of California's Senator Thomas Kuchel, the U. S. Navy has withdrawn its application for nearly 900,000 acres in the Saline Valley sector of Inyo County, California, for use as a gunnery range.

If this report is confirmed, it means that commercial and recreational groups which have been opposing the seizure of this land, have won an important victory.

In the meantime, however, the Navy has stirred up a hornet's nest in northwestern Nevada where it is proposing to take over nearly two million acres in Washoe, Pershing and Humboldt counties for aerial gunnery purposes.

It appears that those of us who have always regarded the Navy as a sea-going outfit, will have to revise our ideas. The admirals now appear to be outstripping the generals in the race to see which branch of the armed forces can acquire the largest portions of the Great American desert. The Navy now has ranges and test stations scattered far and wide over the desert country—millions and millions of acres of them. And as nearly as I can determine, in all this vast terrain which the admirals have taken over, there isn't a pond of water big enough to float a small torpedo boat.

I am beginning to suspect that this so-called unification of the armed forces is a phoney. Otherwise why is it necessary that each branch of the service—the Army, the Navy, the Marines and the Air Force—should have its own private shooting grounds? If a war ever comes it surely will be necessary that these elements be coordinated under a single command. At least that was done to a large extent in the last war, and it worked out quite effectively.

As a civilian, I would like to ask why, if war-time operation calls for unification of the various armed forces, it wouldn't be a good idea to get some practice in coordination by working together on the same gunnery and bombing ranges in peace time? And thereby make it possible to turn back to the miners and cattlemen and recreation-seeking civilians some of the great areas which are now posted against all commercial and recreational trespass.

\* \* \*

Early in September I spent three days at the annual convention of the Federation of Western Outdoor Clubs at the Idyllwild, California, mountain resort. Thirty organizations were represented—hiking clubs, mountaineers, campers, naturalists, explorers, conservationists — folks whose greatest pleasure is in discovering and preserving the beauty in what is left of the American wilderness.

They are banded together to gain the strength necessary to combat successfully those commercial and political

groups which regard all the natural resources merely as fodder for the cash register. It is because America has always had men and women who would fight for the preservation of the natural beauty in mountains, forests and desert that we have a great system of national parks and monuments.

The current program of the FWOC includes the following:

- Opposition to the construction of high speed roads through national parks and monuments.

- Participation in a nation-wide program for the protection of highways, parks and campsites against litterbugs and strewnballs.

- Opposition to the concession granted the Winter Park Authority of Palm Springs for the construction of a tramway and hotels and concessions in the San Jacinto State Park.

- Improved recreational facilities in National Forests.

- Opposition to the opening of Joshua Tree National Monument to mining.

- Protection of Dinosaur National Monument against the construction of power dams.

- Establishment of Goblin Valley in Utah as a National Monument.

- Opposition to the seizure of national park and monument lands by the armed forces for bombing and range purposes.

It is unfortunate that an organization such as this has to spend so much of its energy and funds on the defensive—defending the parks and forests from those who for private gain would encroach and destroy. There is no monetary gain for the members of the FWOC in such a program as they are sponsoring. If they are selfish in wishing to preserve the beauty of God's outdoors for themselves—they are also seeking to preserve the spiritual values involved for all Americans without racial or religious discrimination. That is democracy at its best.

\* \* \*

From my scrapbook: This paragraph by Dr. W. V. Coffin, taken from E. C. Alvord's book, *Deserts*—"The lure of the desert is in its great stillness, its solitude and its hidden resources. In its peaceful aspect it is restful. In its danger-signals there is inspiration. In the fury of its storms there is the challenge to high endeavor. To battle successfully with a great desert is to be equipped for conquest. To invade the desert with ignorance and timidity and lack of definite purpose is to add another bleaching skeleton to the thousands who have become its prey. But to invade it with courage, with intelligence, with resources and with definite aim, is to see it blossom as the rose and yield an untold volume of wealth."



# BOOKS of the SOUTHWEST

## POOR IN THINGS, RICH IN SPIRIT

*The Gift Is Rich* is a different type of book about the American Indians — dedicated to "the scores of Indian Americans old and young, who, through their quiet and deep friendship have taught the author resounding lessons in the fine art of meaningful living." The book was written by E. Russell Carter.

Many of today's customs and pastimes in the United States are of Indian origin. Also, the tribesmen who occupied these lands when the first Europeans crossed the Atlantic have contributed many words to the English vocabulary. For instance, the word "okeh" or "okay" is of Choctaw origin. In the tribal language it means that two people have come to an agreement.

Americans of Indian ancestry also have contributed many fine examples of prose and poetry. Included in the book is the entire Navajo poem, "A Prayer" by Washington Matthews, lines from which are inscribed on trail shrines—"In beauty may I walk . . ."

The artist who sketched many fine decorations for the book is C. Terry Saul, a young Indian American born in the Choctaw Nation in Oklahoma. Indian art, as the author points out, shows an inherent desire to "beautify all things they create by creating them to fulfill their purpose to tell a story. The Indian will make a useful pottery jar, but will not stop there; it must be decorated, as 'beauty should not be denied the most common things . . .'"

Published by Friendship Press. New York. 117 pages. Cloth bound \$2.00, paper bound \$1.25.

### Navajo Prayer

Navajo prayer or poem, lines from which are inscribed on the Trail Shrine, at Desert Magazine:

*In beauty may I walk.  
All day long may I walk.  
Through the returning seasons may I walk . . .*

*With beauty may I walk.  
With beauty before me, may I walk.  
With beauty behind me, may I walk.  
With beauty above me, may I walk.  
With beauty below me, may I walk.  
With beauty all around me, may I walk.*

*In old age wandering on a trail of beauty, lively, may I walk.  
In old age wandering on a trail of beauty, living again, may I walk.  
It is finished in beauty.  
It is finished in beauty.*

—From "A Prayer"  
by Washington Matthews

## SANTA FE TO LOS ANGELES TRAIL HISTORY RECORDED

Santa Fe was the land of sheep and Los Angeles the land of horses. The New Mexicans needed horses; the Californians wool. Motivated by this favorable economic circumstance Spaniards and then Americans followed Indian trails winding north from Santa Fe into Utah and then southwest to California through the desert. The history of this route, which reached its heyday in the 1830s and 1840s, is the subject of a book, *The Old Spanish Trail*, by LeRoy and Ann Hafen.

It would perhaps be more proper to call the trail a "general direction" for no two trains ever followed the same path and experienced travelers were forever getting lost. Most geographic locations were renamed several times.

The mule train loaded with wool took 60 days to travel from Santa Fe to Los Angeles over the 1200 mile trail. Illegal traffic in stolen horses and Indian slaves was carried on over the trail but, as is always the case, records of this type business are very rarely handed down.

This book is the first volume of a 15 volume series entitled *The Far West and the Rockies*, 1820-1875, planned by the Arthur H. Clark Co., publishers, of Glendale, California.

Folding colored map of the trail; portraits and other illustrations; index; appendix; 377 pages. Limited edition. \$9.50.

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## THE NATURAL HISTORY OF NORTH AMERICAN AMPHIBIANS and REPTILES

By J. A. OLIVER

Curator of Reptiles, New York Zoological Society

304 pages, \$6.95

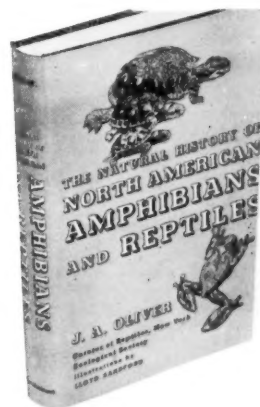
Here, in a big, fascinating new book by a scientist, known for acute observation and the clarity and simplicity of his writing, are the life histories, habits and idiosyncrasies of one of the most interesting of our native fauna.

Odd facts, new research and intriguing folklore—even instructions on keeping these animals as pets—make this authoritative work not only one of the most enlightening of recent books on nature, but one of the most entertaining to read.

The illustrations, drawn from life by Lloyd Sandford, staff artist, New York Zoological Society, are themselves a major contribution to nature history.

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## A TALE OF VIOLENCE AND ROMANCE IN THE SOUTHWEST

*The Mestizo* by Bill Parks is some of the better fiction to come recently of the Southwest. The author knows his rugged Arizona desert. For the last eight years he has been a guide at the Grand Canyon.

In *The Mestizo*, rancher Dan Greenwood, in 1889 wanted to rebuild his ranch in Arizona, but encounters violence, smuggling and romance. He meets the Yaqui mestizo . . . "the flopping sombrero of the mestizo had given Dan another glimpse of the strange, cruel eyes—a pair of eyes he would remember for a long time to come. And perhaps meet again . . ." And Sally Frazier comes to the ranch—the girl from the east, who eventually becomes a true ranch hand and falls in love with the spirit of the West. The reader will be delighted with Fiddle-neck and Mile High, two favorite characters of the town, who are put into jail, mistakenly, by the new deputy.

The author writes well of people of the desert . . . "Dan . . . possessed a deep innate affinity with Nature; a secret companionship with all that he gazed upon, all that he could hear, or feel, or smell or absorb into his being."

The story comes to an explosive ending, and as much as the mestizo is the villain, so is little neotoma, the pack rat, the hero, in the end.

Published by the Macmillan Co., New York. 187 pages. \$2.75.

Books reviewed on this page are available at Desert Crafts Shop, Palm Desert. Add three percent sales tax on orders to be sent to California.

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